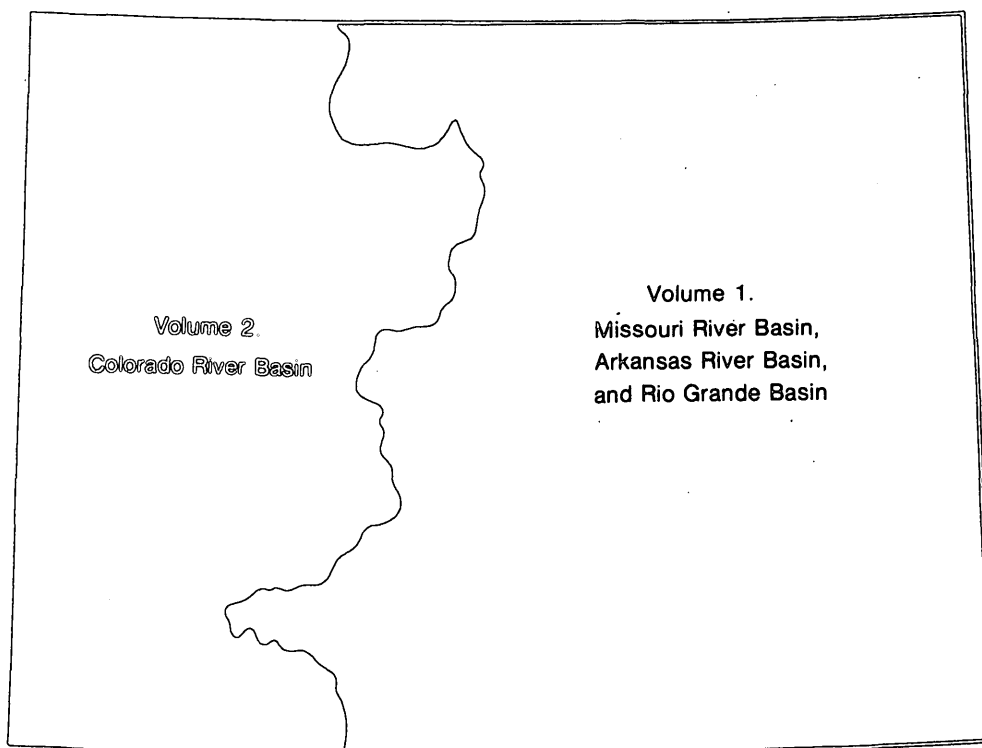




Water Resources Data Colorado Water Year 1990

Volume 2. Colorado River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CO-90-2
Prepared in cooperation with the State of Colorado
and with other agencies

CALENDAR FOR WATER YEAR 1990

1989

OCTOBER	NOVEMBER	DECEMBER
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1990

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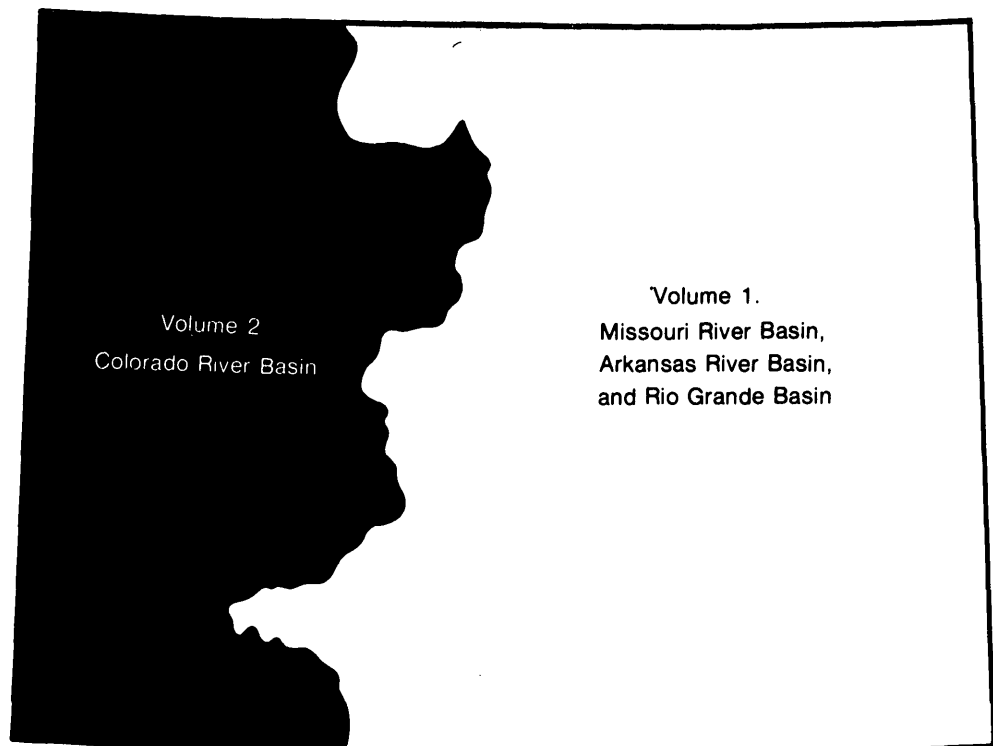
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29 30 31	26 27 28 29 30 31	23 24 25 26 27 28 29
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Water Resources Data Colorado Water Year 1990

Volume 2. Colorado River Basin

by R.C. Ugland, B.J. Cochran, M.M. Hiner, R.G. Kretschman, E.A. Wilson, and J.D. Bennett



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CO-90-2
Prepared in cooperation with the State of Colorado
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

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U. S. GEOLOGICAL SURVEY

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1991

PREFACE

This volume of the annual hydrologic data report of Colorado is one of a series of annual reports that document hydrologic data gathered from the U. S. Geological Survey's surface- and ground-water data-collection networks in each state, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Colorado are contained in two volumes:

Volume 1. Missouri River, Arkansas River, and Rio Grande
basins in Colorado,
Volume 2. Colorado River basin.

This report is the culmination of a concerted effort by dedicated personnel of the U. S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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(Letter after station name designates type and frequency of published data.

Daily tables: (D) discharge, (C) specific conductance, (S) sediment,
(T) temperature, (e) elevation or contents, (O) dissolved oxygen, (P) pH.

Partial tables: (c) chemical, (b) biological, (m) microbiological,
(s) sediment, (t) temperature)

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WATER RESOURCES DATA - COLORADO, 1990

VOLUME 2: COLORADO RIVER BASIN

By R. C. Ugland, B. J. Cochran, R. G. Kretschman, E. A. Wilson, J. D. Bennett, and M. M. Hiner

INTRODUCTION

The Water-Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Colorado each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in the report series entitled "Water Resources Data - Colorado".

This report (Volume 2 of two volumes) includes records of surface water in the State, west of the Continental Divide. Specifically, it contains: (1) discharge records for 189 streamflow-gaging stations, for 5 partial-record streamflow stations and 1 miscellaneous streamflow site; (2) stage and contents for 13 lakes and reservoirs; and (3) water-quality data for 46 streamflow-gaging stations, miscellaneous water-quality data for 133 gaged sites, and meteorological data for 2 sites. Locations of lake and streamflow-gaging stations and water-quality stations are shown in figure 1, locations of crest-stage partial-record stations are shown in figure 2. Four pertinent stations in bordering States also are included in this report. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Colorado.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Colorado were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-water Supply of the United States," Parts 68, 7, and 8. For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States." Data on ground-water levels for the 1935 through 1955 water years were published annually under the title "Water Levels and Artesian Pressures in Observation Wells in the United States." For the 1956 through 1974 water years the data were published in four 5-year reports under the title "Ground-Water Levels in the United States." Water-supply papers may be purchased from the, U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, CO 80225.

For water years 1961 through 1970, streamflow data were released by the Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data on streamflow, water quality, and ground-water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CO-90-2." These water-data reports are for sale, in paper copy or in micro-fiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (303) 236-4882.

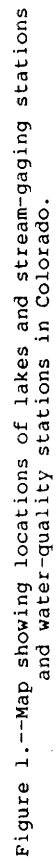
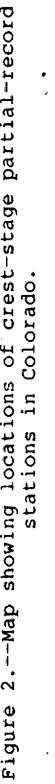


Figure 1.--Map showing locations of lakes and stream-gaging stations and water-quality stations in Colorado.



COOPERATION

The U.S. Geological Survey and organizations of the State of Colorado have had cooperative agreements for the systematic collection of surface-water records since 1895 and for water-quality records since 1941. Organizations that assisted in collecting data for this report through cooperative agreement with the Survey are:

Arkansas River Compact Administration, Jim Rodger, Secretary/Treasurer.
 Bent County Commissioners, Harrell Ridley, Chairman.
 Boulder County, Joe Huey.
 Castle Pines Metro District, Paul Dannels.
 Castle Pines Northern Metro District, Paul Dannels.
 Centennial Water and Sanitation District, Rick McCloud.
 Cherokee Water and Sanitation District, F. S. Loosley, Manager.
 City and County of Denver, Board of Water Commissioners, Monte Pascoe, President.
 City of Arvada, Sterling E. Shultz.
 City of Aspen, James Markalunas, City Manager.
 City of Aurora, Thomas Griswold, Director of Utilities.
 City of Boulder, Delanni Wheeler, City Manager.
 City of Broomfield, Dan Mayo.
 City of Colorado Springs, Department of Public Works, Hugh King.
 City of Englewood, Mike Woika, Utilities Manager.
 City of Fort Collins, G. Keith Elmund, Civil Engineer II.
 City of Glendale, Robert Taylor.
 City of Glenwood Springs, Kevin Kadlec, City Manager.
 City of Golden, Dan Hartman, Director of Public Works.
 City of Lakewood, Jay Hutchison.
 City of Longmont, Randy Earley.
 City of Loveland, Richard Leffler.
 City of Northglenn, Kip Scott.
 City of Pueblo, Jim Diorio, Director.
 City of Steamboat Springs, J. Zimmerman.
 City of Thornton, Ron Lovan, Assistant Utilities Director.
 City of Westminster, Dan Strietelmeier.
 Colorado Department of Health, Brad Beckham, Executive Director.
 Colorado Department of Highways, A. Siccardi.
 Colorado Division of Mined Land Reclamation, James Pendelton, Director.
 Colorado Division of Water Resources, J. A. Danielson, State Engineer.
 Colorado Division of Wildlife, Marilyn Warmoth.
 Colorado River Water Conservation District, David Merritt, Secretary-Engineer.
 Colorado Springs Department of Public Utilities, J. D. Phillips, Director.
 Colorado Water Conservation Board, David Walker, Director.
 Delta County Board of County Commissioners, David R. Erickson, Administrator.
 Denver Board of Water Commissioners, Marc Waage.
 Denver Regional Council of Governments, Robert L. Tonsing, Chairman.
 Department of Natural Resources, Oil and Gas Conservation Commission, Jim Kenney.
 Dolores Water Conservation District, Bruce McAfee.
 Eagle County Board of Commissioners, James Fritze, County Manager.
 East Grand County Water-Quality Board, Dick Leonard, Chairman.
 Evergreen Metropolitan District, G. C. Schulte, General Manager.
 Fountain Valley Authority, Edward Bailey.
 Fremont Sanitation District, George Medaris.
 Garfield County, Mark Bean, Director of Administrative Services.
 Grand County, R. Moody, County Manager.
 Jefferson County Board of County Commissioners, Mary Lynn Tucker, Assistant County Attorney.
 Lower Fountain Water-Quality Management Association, Stuart Loosely, President.
 Metropolitan Denver Sewage Disposal District No. 1, Bob Hite, Manager.
 Moffat County, Barbara L. Baker, Clerk and Recorder.
 Northern Colorado Water Conservancy District, L. Simpson, Secretary.
 Pikes Peak Area Council of Governments, Maurice Rahimi.
 Pitkin County Board of County Commissioners, Mark Fuller, County Development Director.
 Pueblo Board of Water Works, Alan Hamel, Executive Director.
 Pueblo County Commissioners, Charles Finley, Director.
 Pueblo County Department of Public Safety and Operations, Steve Douglas, Director.
 Pueblo West Metro Water District, Lenord McDaniel, Manager.
 Rio Blanco County Board of County Commissioners, Terry Lowell.
 Rio Grande Water Conservation District, Ralph Curtis, Manager.
 Southeastern Colorado Water Conservancy District, C. L. Thomson, General Manager.
 Southern Ute Indian Tribe, Howard Richards.
 Southwestern Water Conservation District, Edward Searle, Manager.
 St. Charles Mesa Water Association, Lee Simpson, Manager.
 Town of Breckenridge, Gary Roberts, Town Manager.
 Town of Castle Rock, Phyllis Brown, Town Clerk.
 Trinchera Water Conservancy District, Dava Deen.
 Uncompahgre Valley Water Users Association, J. Hokit, Manager.
 Upper Arkansas Area Council of Governments, Bill Simpson, Executive Director.
 Upper Arkansas River Water Conservancy District, K. Baker, General Manager.
 Upper Black Squirrel Groundwater Management District, Murrill Fossinger, President.
 Upper Eagle Valley Water and Sanitation District, Bill George, General Manager.
 Upper Yampa Water Conservancy District, J. Fetcher.
 Urban Drainage and Flood Control District, L. Scott Tucker, Executive Director.
 Ute Mountain Ute Indian Tribe, Dorrance Steele.
 Vail Valley Conservation and Water Authority, Bill George, General Manager.
 Yellow Jacket Water Conservancy District, F. G. Cooley, Secretary-Council.

Financial assistance was also provided by the U.S. Army, Corps of Engineers, U.S. Army; U.S. Air Force; Bureau of Land Management, Bureau of Mines, Bureau of Reclamation, National Park Service, U.S. Environmental Protection Agency, U.S. Federal Emergency Management Agency, and U.S. National Weather Service. Organizations that supplied data are acknowledged in station descriptions.

OVERVIEW OF HYDROLOGIC CONDITIONS [West of the Continental Divide]

Prepared by Harold E. Petsch, Jr., and K.R. Wilke

Precipitation

Precipitation data for water year 1990 were obtained from published reports of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Center, for the National Weather Service division in Colorado that is west of the Continental Divide. These data are listed in table 1. Precipitation and departures-from-normal precipitation (1951-80) are listed for the first 6 months of the water year when precipitation is predominately snow and for the remaining 6 months when precipitation is predominately rain. Also listed are the precipitation and departure-from-normal precipitation for the entire water year.

Precipitation was 34 percent less than normal for October-March and 18 percent greater than normal for April-September in the Colorado Drainage Basin. For water year 1990, precipitation in the Colorado Drainage Basin was 8 percent less than normal.

Graphs of monthly precipitation for the water year and for normal monthly precipitation at selected weather stations are shown in figure 3. Monthly precipitation data for water year 1990 were supplemented by data obtained from the Colorado State University, Department of Atmospheric Science, Colorado Climate Center in Fort Collins.

Table 1.--Precipitation during water year 1990 and departures-from-normal precipitation (1951-80), in inches

National Weather Service division	October-March		April-September		Water year 1990	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Colorado Drainage Basin	5.04	-2.57	9.15	1.40	14.19	-1.17

Streamflow

Monthly mean discharges during water year 1990 at selected streamflow-gaging stations are compared to long-term mean monthly discharges in figure 4. Individual graphs show the varied streamflow west of the Continental Divide during the water year. The graphs for the gaging stations indicate that, for the most part, monthly discharges during the water year had the same general trend as long-term mean monthly discharges, but were consistently less than the long-term means, particularly during April through September. At the selected gaging stations, annual mean discharges for water year 1990 were from 31 to 51 percent less than the long-term averages.

The graph for gaging station 09251000, Yampa River near Maybell (fig. 4, site E) indicates that monthly discharges for water year 1990 were greater than long-term means only for March. The graphs for the remaining gaging stations (fig. 4, sites A, B, C, D, F, G) indicate that monthly discharges for water year 1990 were less than long-term means for all of the months. The mean discharges for May through July for water year 1990 were less than the long-term mean discharges for that period at each of the selected gaging stations. The May through July mean discharge for water year 1990 was from 27 to 36 percent less than the long-term mean at gaging stations 09070000, Eagle River below Gypsum (fig. 4, site A), and 09361500, Animas River at Durango (fig. 4, site G); from 42 to 49 percent less at gaging stations 09114500, Gunnison River near Gunnison (fig. 4, site B), 09172500, San Miguel River near Placerville (fig. 4, site D), and 09251000, Yampa River near Maybell (fig. 4, site E); and from 56 to 64 percent less than the long-term means at gaging stations 09163500, Colorado River near Colorado-Utan State line (fig. 4, site C), and 09304500, White River near Meeker (fig. 4, site F).

Peak discharges during water year 1990 and for the period of record for selected gaging stations are listed in table 2. The peak discharge at each of the selected gaging stations was less than the long-term median value. At 15 of the selected gaging stations, peak discharges were less than the 25th-percentile values; but, for 13 of these stations, the peak discharges were substantially greater than the previous low peak discharges. For the remaining two sites, gaging station 09152500, Gunnison River near Grand Junction, and gaging station 09171100, Dolores River near Bedrock, the peak discharges were lower than any previous peak discharges.

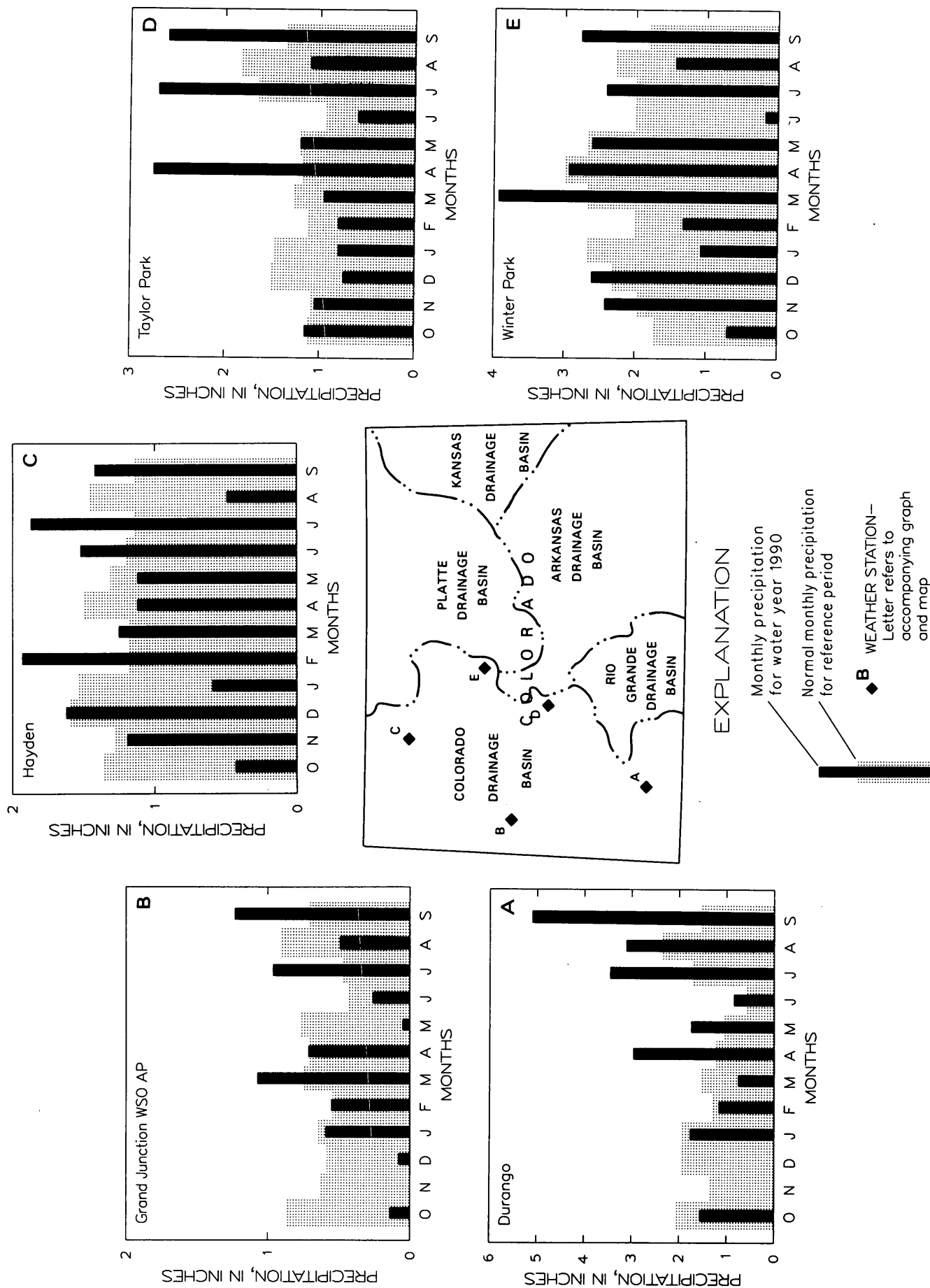
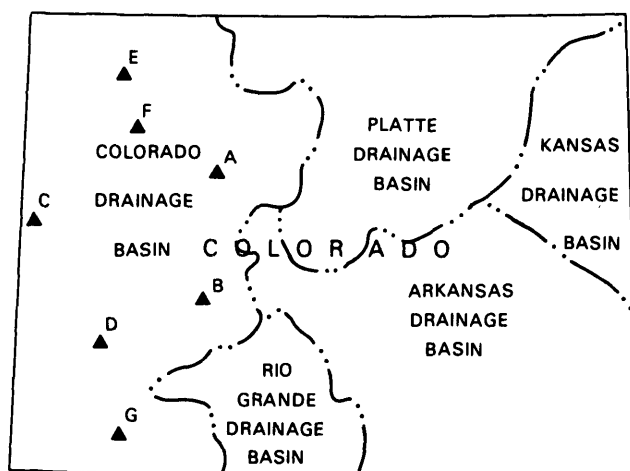
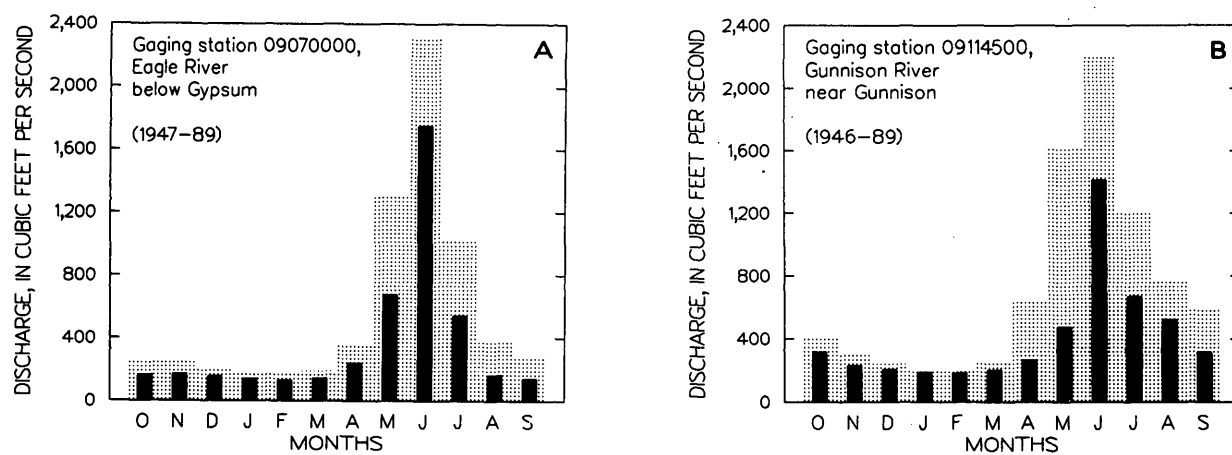


Figure 3. ---Comparison of monthly precipitation for water year 1990 to normal monthly precipitation for the reference period 1951-80.

Table 2.--Peak discharges for water year 1990 and for the period of record at selected gaging stations

[mi², square miles; ft³/s, cubic feet per second]

Gaging station identification	Drainage area (mi ²)	Period of record (water years)	Water year 1990		Period of record		Remarks on 1990 peak discharge
			Date	Peak discharge (ft ³ /s)	Date	Peak discharge (ft ³ /s)	
09034500 Colorado River at Hot Sulphur Springs	825	1905-89	7/8	468	6/15/21	10,300	Less than 25th percentile
09070000 Eagle River below Gypsum	945	1947-89	6/9	3,210	5/25/84	7,020	Less than median
09070500 Colorado River near Dotsero	4,394	1941-89	6/8	5,060	5/25/84	22,200	Less than 25th percentile
09085000 Roaring Fork River at Glenwood Springs	1,451	1906-9, 1911-89	6/11	4,900	7/1/57	19,000	Less than 25th percentile
09085100 Colorado River below Glenwood Springs	6,013	1967-89	6/11	9,810	5/25/84	31,500	Less than 25th percentile (4th lowest)
09095500 Colorado River near Cameo	8,050	1934-89	6/11	11,700	5/26/84	39,300	Less than 25th percentile
09114500 Gunnison River near Gunnison	1,012	1911-27, 1945-89	6/11	2,430	6/13/18	11,400	Less than 25th percentile
09132500 North Fork Gunnison River near Somerset	526	1934-89	6/6	1,490	5/24/84	9,220	Less than 25th percentile (4th lowest)
09149500 Uncompahgre River at Delta	1,129	1903-31, 1939-89	6/6	1,020	5/15/84	5,800	Less than 25th percentile
09152500 Gunnison River near Grand Junction	7,928	1897-99, 1902-6, 1917-89	6/6	2,870	5/23/20	35,700	New low
09163500 Colorado River near Colorado-Utah State line	17,843	1951-89	6/12	12,600	5/27/84	69,800	Less than 25th percentile
09166500 Dolores River at Dolores	504	1896-1903, 1911-12, 1922-89	5/25	1,700	10/5/11	10,000	Less than 25th percentile
09171100 Dolores River near Bedrock	2,145	1970-89	9/6	778	4/30/73	9,500	New low
09239500 Yampa River at Steamboat Springs	604	1904-6, 1910-89	6/6	2,540	6/14/21	6,820	Less than 25th percentile
09251000 Yampa River near Maybell	3,410	1904-5, 1916-89	6/13	7,020	5/17/84	25,100	Less than 25th percentile
09304500 White River near Meeker	755	1901-5, 1910-89	6/12	1,960	5/25/84	6,950	Less than 25th percentile
09346400 San Juan River near Carracas	1,230	1962-89	6/11	3,420	9/6/70	9,730	Less than median
09361500 Animas River at Durango	592	1912-89	6/6	4,660	10/5/11	25,000	Less than median



EXPLANATION

Monthly discharge
for water year 1990

Mean monthly discharge
for reference period

▲ **B** GAGING STATION—
Letter refers to
accompanying graph
and map

(1900-89) REFERENCE PERIOD

Figure 4.--Comparison of monthly discharges for water year 1990 to mean monthly discharges for the reference periods indicated on the individual graphs.

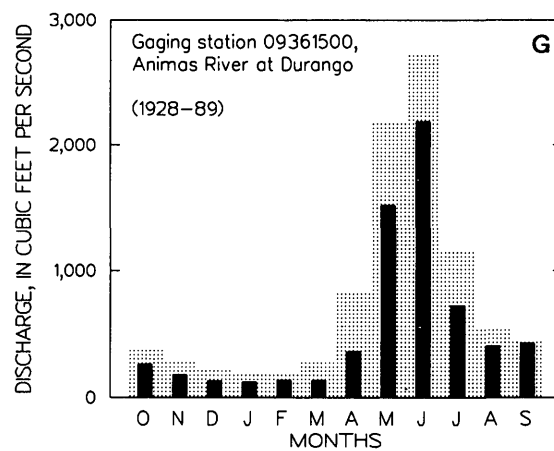
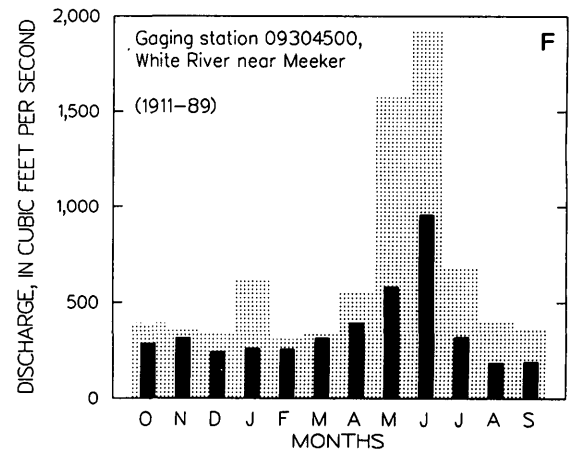
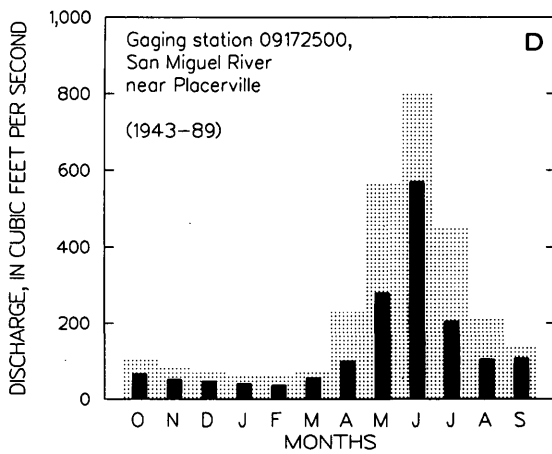
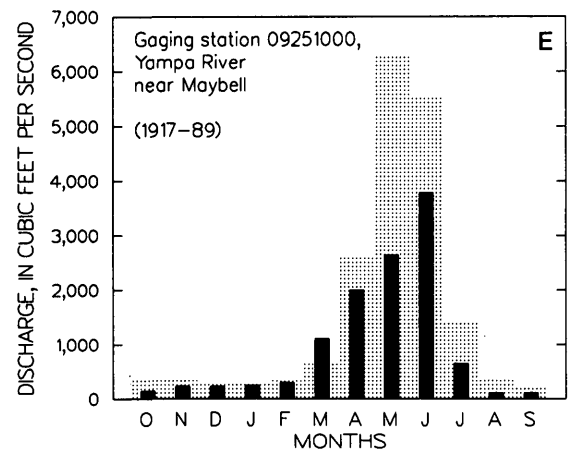
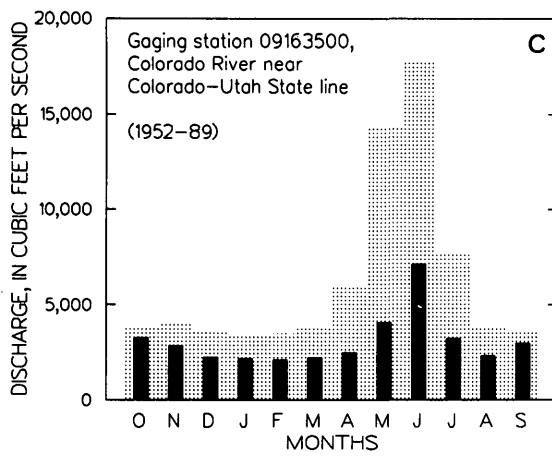


Figure 4.--(continued)

Chemical Quality of Streamflow

To determine if substantial changes occurred during water year 1990 in the chemical quality of streamflow, an analysis was made of specific conductance, which was measured approximately monthly at gaging stations on five representative streams. Each gaging station either is the most downstream station on that stream or is representative of a substantial part of the drainage area of that stream. A comparison of the range and the distribution of the specific conductance for water year 1990 to long-term values for each selected gaging station is shown in figure 5.

Specific conductance can be used to estimate the dissolved-solids concentration in water because specific conductance is directly proportional to the concentrations of ions in water. To determine if there were significant differences between values of specific conductance for water year 1990 and values for the period of record used for comparison, a statistical technique called the Wilcoxon-Mann-Whitney rank sum test was used. This test is a non-parametric counterpart to the common t-test and does not require the data to have normal distribution.

The Wilcoxon-Mann-Whitney rank sum test was applied to the hypothesis that the mean specific conductance for water year 1990 was equal to the mean for the period of record. The procedure for testing the hypothesis involves computing a test statistic from the ranks of the data by using a pooled standard deviation and comparing the test statistic to a value obtained from a table of "Student's" t values (Box and others, 1978). The table value is $(1 - \alpha/2)$, where α (the level of significance) equals 0.05, at the appropriate degrees of freedom for the number of samples. If the absolute value of the computed test statistic (t_R) is greater than the tabular t value (t_{tab}), the hypothesis is rejected. A rejection of the hypothesis is statistical evidence that the two means are different.

Results of the Wilcoxon-Mann-Whitney rank sum tests for the five gaging stations are listed in table 3. For three of the stations--09095500, Colorado River near Cameo; 09306290, White River below Boise Creek, near Rangely; and 09361500, Animas River at Durango--the tests indicate that the mean specific conductance for water year 1990 and the mean specific conductance for the period of record are not different statistically.

The mean specific conductances for water year 1990 for gaging stations 09152500, Gunnison River near Grand Junction, and 09177000, San Miguel River at Uravan, were substantially greater than the mean specific conductances for the 10-year period of record 1980-89. Published records for the stations indicate that there is an inverse relation between specific conductance and discharge. For water year 1990, mean discharges at the stations were 34 percent of the 10-year mean for the Gunnison River station and 29 percent of the 10-year mean for the San Miguel River station. Therefore, it is reasonable to expect that the mean specific conductances for water year 1990 are substantially greater than the mean specific conductances for the 10-year period.

Table 3.--Results of Wilcoxon-Mann-Whitney rank sum tests comparing mean specific conductance of discharge for water year 1990 with mean for the period of record at selected gaging stations

[Specific conductance, in microsiemens per centimeter at 25 degrees Celsius;
 t_R , calculated test statistic; t_{tab} , t-values from standard table; A, accepted; R, rejected]

Gaging station identification	Specific conductance						Wilcoxon-Mann-Whitney rank sum test			
	Water year 1990			Period of record			Period u d (water year)	t_R	t_{tab}	Hypothesis
	Number of values	Mean	Standard devia- tion	Number of values	Mean	Standard devia- tion				
09095500 Colorado River near Cameo-----	11	1,017	293	108	848	279	1980-89	1.63	1.98	A
09152500 Gunnison River near Grand Junction-----	10	1,206	181	93	817	317	1980-89	3.73	1.98	R
09177000 San Miguel River at Uravan-----	11	1,009	442	119	663	322	1980-89	2.91	1.98	R
09306290 White River below Boise Creek, near Rangely-----	12	718	185	105	668	165	1983-89	1.17	1.99	A
09361500 Animas River at Durango-----	13	503	207	132	412	207	1980-89	1.65	1.98	A

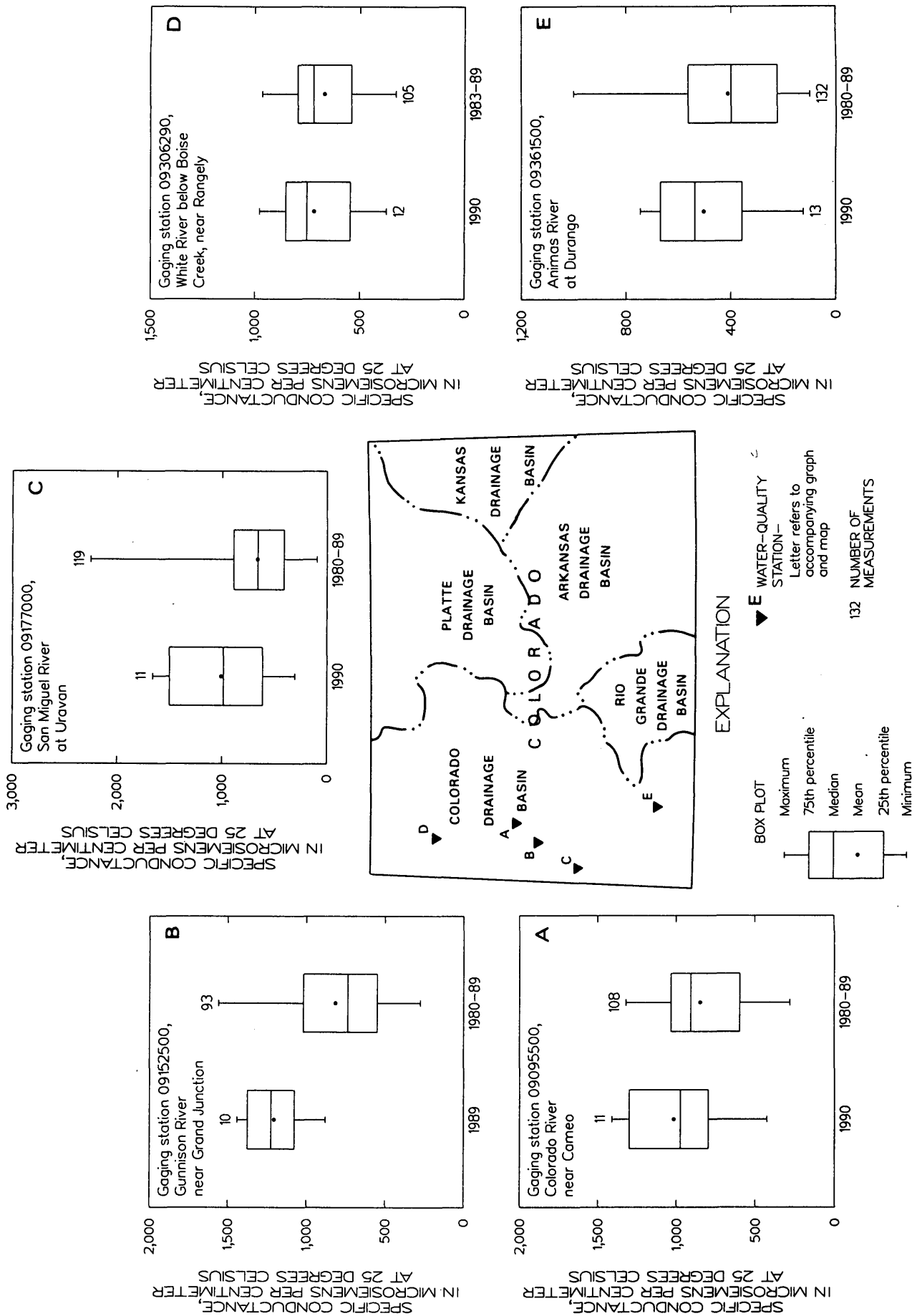


Figure 5.--Comparison of range and distribution of specific conductance measured during water year 1990 to long-term values.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 small sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1990 water year that began on October 1, 1989, and ended September 30, 1990. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface water. The locations of the stations where the surface-water data were collected are shown in figures 1 and 2. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether stream site or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for miscellaneous sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for surface-water stations where only infrequent measurements are made.

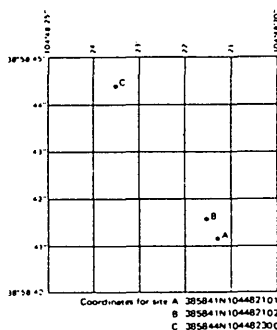
Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 09010500, which appears just to the left of the station name, includes the two-digit Part number "09" plus the six-digit downstream-order number "010500." The Part number designates the major river basin; for example, Part "09" is the Colorado River basin.

Latitude-Longitude System

The identification numbers for wells, springs, and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote the degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and may have no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below.)



System for numbering wells, springs, and miscellaneous sites.

The local well number locates a well within a 10-acre tract using the U. S. Bureau of Land Management system of land subdivision. The components of the local well number proceed from the largest to the smallest land subdivisions. This is in contrast to the legal description, which proceeds from the smallest to the largest land subdivision. The largest subdivision is the survey. Colorado is governed by three surveys: The Sixth Principal Meridian Survey (S), the New Mexico Survey (N), and the Ute Survey (U). Costilla County was not included in any of the above official surveys. This report follows the convention of the Costilla County Assessor in which the northern part of the county is governed by the Sixth Principal Meridian Survey and the southern part of the county is governed by a local system called the Costilla Survey (C). The first letter of the well location designates the survey.

A survey is subdivided into four quadrants formed by the intersection of the baseline and the principal meridian. The second letter of the well location designates the quadrant: A indicates the northeast quadrant, B the northwest, C the southwest, and D the southeast. A quadrant is subdivided in the north-south direction every 6 mi by townships and is divided in the east-west direction every 6 mi by ranges. The first number of the well location designates the township and the second number designates the range.

The 36-mi² area described by the township and range designation is subdivided into 1-mi² areas called sections. The sections are numbered sequentially. The third number of the well location designates the section. The section, which contains 640 acres, is subdivided into quarter sections. The 160-acre area is designated by the first letter following the section: A indicates the northeast quarter, B the northwest, C the the southwest, and D the southeast. The quarter section is subdivided into quarter-quarter sections. The 40-acre area is designated in the same manner by the second letter following the section. The 10-acre area is designated in the same manner by the third letter following the section. If more than one well is located within the 10-acre tract, the wells are numbered sequentially in the order in which they were originally inventoried. If this number is necessary, it will follow the three-letter designation.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles. Records of miscellaneous discharge measurements or of measurements from special studies may be considered as partial records, but they are presented separately in this report. Locations of crest-stage partial record stations for which data are given in this report are shown in figure 2.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage, with digital recorders that punch stage values on paper tapes at selected time intervals, with electronic recorders that store stage values on computer chips at selected time intervals, or with satellite data collection platforms that transmit near real-time data at selected time intervals to office computers. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves, or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections. "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listed may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

If applicable, data collected at partial-record stations follow the information for continuous-record sites. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true value; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for daily values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

The National Water Data Exchange (NAWDEx), U.S. Geological Survey, Reston, VA 22092, maintains an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Colorado District office. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

"In March 1989 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias."

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched or recorded at short intervals on a magnetic tape, computer chip, paper tape, or some other medium. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed on pages 30 and 31 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S.G.S. District Office whose address is given on the back of the title page of this report.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are recorded to the nearest 0.1 degree Celsius. Water temperatures measured at the time of water-discharge measurements are published in this report as supplemental water-quality for gaging stations.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally, all other samples are analyzed in the Geological Survey laboratories in Arvada, Colo., or Doraville, Ga. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remarks codes may appear with the water-quality data in this report:

PRINTED OUTPUT REMARK

E Estimated value

> Actual value is known to be greater than the value shown

< Actual value is known to be less than the value shown

K Based on non-ideal colony count

M Presence of material verified but not quantified

ACCESS TO WATSTORE DATA

The National WATER Data STORAGE and RETRIEVAL System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's District offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C \pm 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C \pm 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organism which produce red or pink colonies with 48 hours at 35°C \pm 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m³), and periphyton and benthic organisms in grams per square meter (g/m²).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at a gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic feet per second per square mile ($\text{ft}^3/\text{s}/\text{mi}^2$) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific time.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 μm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage" although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each groundwater observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter or particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Unit Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve
Gravel.....	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is a community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time $\text{mg C}/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3 \cdot \text{time})$ for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time $\text{mg O}_2/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$ for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) \times discharge (ft^3/s) \times 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow ($7 Q_{10}$) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituents.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom.....	Animal
Phylum.....	Arthropoda
Class.....	Insecta
Order.....	Ephemeroptera
Family.....	Ephemeridae
Genus.....	Hexagenia
Species.....	Hexagenia limbata

Thermograph is an instrument that continuously records variation of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

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- Report 13, 1961, The single-stage sampler for suspended sediment: Washington, D. C., U.S. Government Printing Office, 105 p.
- Report 14, 1963, Determinations of fluvial sediment discharge: Washington, D. C., U.S. Government Printing Office 151 p.

DISCONTINUED GAGING STATIONS

The following continuous-record gaging stations in Colorado have been discontinued. Daily records were collected and published for the period of record shown for each station.

Station number	Drainage area (sq mi)	Period of record (calendar years)
09010100 Lady Creek near Grand Lake, CO	0.08	1969-75
09010400 Jimmy Creek near Grand Lake, CO	0.08	1969-75
09010600 Onahu Creek near Grand Lake, CO	8.84	1969
09011000 Colorado River near Grand Lake, CO	102	1904-18, 1933-86
09011500 Little Columbine Creek above Shadow Mountain Lake at Grand Lake, CO	1.65	1950-55
09012400 Tonahutu Creek near Grand Lake, CO	16.0	1969
09012410 Harbison Ditch near Grand Lake, CO	--	1969
09012420 Tonahutu Creek below Harbison Ditch near Grand Lake, CO	--	1969
09012500 North Inlet at Grand Lake, CO	45.9	1905-09, 1910-12, 1947-55
09013500 East Inlet near Grand Lake, CO	27.2	1947-55
09014000 Grand Lake Outlet at Grand Lake, CO	76.3	1904-09, 1910-13
09015000 Colorado River below Shadow Mountain Reservoir, CO	190	1947-59
09015500 Columbine Creek above Lake Granby near Grand Lake, CO	7.38	1950-55
09016000 Roaring Fork above Lake Granby, CO	5.95	1951-55
09016500 Arapahoe Creek at Monarch Lake Outlet, CO	46.9	1944-71
09017000 Arapahoe Creek below Monarch Lake, CO	56.9	1934-44
09018000 Stillwater Creek above Lake Granby, CO	17.5	1950-55
09019000 Colorado River below Lake Granby, CO	312	1950-82
09020000 Willow Creek near Granby, CO	109	1934-53
09020500 Willow Creek above Willow Creek Reservoir, CO	127	1953-60
09021000 Willow Creek below Willow Creek Reservoir, CO	134	1953-82
09022500 Moffat Water Tunnel at East Portal, CO	--	1935-82
09023500 Fraser River above Winter Park, CO	22.4	1907-09, 1934-37
09031900 Ranch Creek Ditch near Fraser, CO	--	1948-67
09032500 Ranch Creek near Tabernash, CO	51.3	1934-60
09033000 Meadow Creek near Tabernash, CO	8.03	1935-56
09033500 Strawberry Creek near Granby, CO	11.6	1935-45
09034000 Fraser River at Granby, CO	297	1904-09, 1937-55
09034800 Little Muddy Creek near Parshall, CO	6.52	1953-65
09035820 South Fork Williams Fork at Upper Station near Ptarmigan Pass, CO	2.78	1984-87
09035880 South Fork Williams Fork below Old Baldy Mountain near Leal, CO	21.8	1985-88
09035830 South Fork Williams Fork near Ptarmigan Pass, CO	4.01	1984-88
09035840 South Fork Williams Fork above Tributary near Ptarmigan Pass, CO	5.53	1984-87
09035845 South Fork Williams Fork Tributary near Ptarmigan Pass, CO	0.60	1984-88
09035850 South Fork Williams Fork above Short Creek near Ptarmigan Pass, CO	6.53	1984-87
09035870 South Fork Williams Fork below Short Creek near Ptarmigan Pass, CO	20.0	1984-87
09036500 Keyser Creek near Leal, CO	13.8	1942-52
09037000 Williams Fork near Scholl, CO	141	1910-17
09037200 Skylark Creek near Parshall, CO	2.42	1958-65
09039000 Troublesome Creek near Pearmont, CO	44.6	1953-83
09039500 Troublesome Creek at Atmore Ranch near Troublesome, CO	48.8	1937-43
09040000 East Fork Troublesome Creek near Troublesome, CO	76.0	1937-43, 1953-83
09040500 Troublesome Creek near Troublesome, CO	168	1904-05, 1921-22, 1937-56
09041000 Muddy Creek near Kremmling, CO	87.4	1937-43, 1955-71
09041100 Antelope Creek near Kremmling, CO	11.5	1955-68
09041200 Red Dirt Creek near Kremmling, CO	19.0	1955-74
09041300 Pass Creek near Kremmling, CO	17.8	1957-70
09043000 Monte Cristo Creek near Hoosier Pass, CO	5.66	1953-58
09044000 Hoosier Creek near Hoosier Pass, CO	1.15	1953-58
09044500 Bemrose Creek near Hoosier Pass, CO	1.95	1953-58
09045000 McCullough Gulch near Breckenridge, CO	4.79	1953-58
09045500 Spruce Creek near Breckenridge, CO	5.23	1953-58
09047000 Blue River at Dillon, CO	128	1910-61
09048000 Snake River at Dillon, CO	90.9	1910-19, 1929-64
09049200 West Tenmile Creek at Copper Mountain, CO	21.0	1973-79
09050000 Tenmile Creek at Frisco, CO	81.0	1942-50
09050500 Tenmile Creek at Dillon, CO	111	1910-19, 1929-61
09051000 Straight Creek near Dillon, CO	12.9	1943-52
09051500 Willow Creek near Dillon, CO	13.4	1942-51
09052500 Boulder Creek near Dillon, CO	9.89	1942-51
09053000 Slate Creek near Dillon, CO	16.6	1942-54
09053500 Blue River above Green Mountain Reservoir, CO	511	1943-71, 1985-88
09054500 Black Creek above Green Mountain Reservoir, CO	18.5	1944-53
09055000 Otter Creek above Green Mountain Reservoir, CO	8.40	1944-53
09055500 Cataract Creek above Green Mountain Reservoir, CO	13.6	1944-53
09056000 Blue River near Kremmling, CO	571	1904-08
09058600 Dickson Creek near Minturn, CO	3.41	1964-71
09060500 Rock Creek near Toponas, CO	47.6	1952-81
09060700 Egeria Creek near Toponas, CO	28.2	1965-73
09060800 Big Alkali Creek near Burns, CO	14.2	1958-65
09060900 Catamount Creek near Burns, CO	5.31	1955-61
09060950 Big Alkali Creek below Castle Creek near Burns, CO	34.2	1981-86
09061000 Sunnyside Creek near Burns, CO	9.04	1952-58

DISCONTINUED GAGING STATIONS--Continued

Station number		Drainage area (sq mi)	Period of record (calendar years)
09061500	Columbine Ditch near Fremont Pass, CO	--	1930-82
09062000	Ewing Ditch at Tennessee Pass, CO	--	1908-82
09062500	Wurtz Ditch near Tennessee Pass, CO	--	1931-82
09063500	Turkey Creek at Red Cliff, CO	29.4	1913-21, 1944-56
09066050	Black Gore Creek near Vail, CO	19.6	1974-79
09066250	Gore Creek at Vail, CO	57.3	1974-79
09066500	Gore Creek near Minturn, CO	101	1911-14, 1944-56
09067000	Beaver Creek at Avon, CO	14.8	1911, 1912-14, 1974-87, 1988
09067300	Alkali Creek near Wolcott, CO	27.3	1958-65
09067500	Eagle River at Eagle, CO	629	1910-24
09067700	East Brush Creek at Yeoman Park near Eagle, CO	9.74	1965-72
09068000	Brush Creek near Eagle, CO	71.4	1950-72
09069500	Gypsum Creek near Gypsum, CO	62.7	1950-55, 1965-72
09071100	Colorado River near Glenwood Springs, CO	--	1941-85
09072500	Colorado River at Glenwood Springs, CO	4,558	1899-1966
09072550	Roaring Fork above Lost Man Creek near Aspen, CO	9.10	1980-86
09073005	Lincoln Creek below Grizzly Reservoir near Aspen, CO	15.2	1980-86
09073500	Roaring Fork River at Aspen, CO	109	1910-21, 1931-64
09073700	Hunter Creek above Midway Creek near Aspen, CO	6.18	1964-80
09073720	Hunter Creek Feeder Conduit near Aspen, CO	--	1981-83
09073790	Midway Creek Feeder Conduit near Aspen, CO	--	1981-83
09073800	Midway Creek near Aspen, CO	8.62	1971-80
09073890	No Name Creek Feeder Conduit near Aspen, CO	--	1981-83
09073900	No Name Creek near Aspen, CO	6.54	1971-80
09075000	Castle Creek near Aspen, CO	67.0	1911-20
09075500	Roaring Fork below Aspen, CO	228	1913-18
09076000	Maroon Creek near Aspen, CO	41.7	1910-17
09076520	Owl Creek near Aspen, CO	6.60	1974-89
09077150	Fryingpan River Feeder Canal near Norrie, CO	--	1971-83
09077200	Fryingpan River near Ivanhoe Lake, CO	18.7	1963-82
09077250	Lily Pad Feeder Canal near Norrie, CO	--	1972-83
09077300	Granite Creek Feeder Conduit near Norrie, CO	--	1981-83
09077400	Fryingpan River near Norrie, CO	32.2	1963-67
09077600	Ivanhoe Creek near Norrie, CO	9.12	1963-76
09077605	Ivanhoe Creek Feeder Canal near Nast, CO	--	1976-83
09077610	Ivanhoe Creek near Nast, CO	9.43	1976-82
09077750	South Fork Fryingpan River Feeder Canal near Norrie, CO	--	1971-83
09077800	South Fork Fryingpan River at Upper Station near Norrie, CO	11.5	1963-82
09077900	South Fork Fryingpan River near Norrie, CO	17.3	1963-67
09077940	Chapman Gulch Feeder Canal near Norrie, CO	--	1971-83
09077945	Chapman Gulch near Nast, CO	6.00	1973-82
09077950	Chapman Gulch near Norrie, CO	6.38	1966-72
09077960	Sawyer Creek Feeder Canal near Norrie, CO	--	1972-83
09078000	Fryingpan River at Norrie, CO	90.6	1910-17, 1947-83
09078040	North Fork Fryingpan River Feeder Canal near Norrie, CO	--	1980-83
09078050	Morman Creek Feeder Canal near Norrie, CO	--	1979-83
09078060	Carter Creek Feeder Canal near Norrie, CO	--	1980-83
09078100	North Fork Fryingpan River above Cunningham Creek near Norrie, CO	12.0	1963-80
09078140	Cunningham Creek Feeder Canal near Norrie, CO	--	1979-83
09078150	Middle Cunningham Creek Feeder Canal near Norrie, CO	--	1980-83
09078200	Cunningham Creek near Norrie, CO	7.12	1963-80
09078300	North Fork Fryingpan River below Cunningham Creek near Norrie, CO	24.2	1963-68
09078500	North Fork Fryingpan River near Norrie, CO	42.0	1910-17, 1947-82
09078900	Lime Creek near Troutville, CO	4.56	1963-68
09079000	Lime Creek at Troutville, CO	7.76	1950-56
09079500	Lime Creek at Thomasville, CO	35.0	1950-56
09080000	Fryingpan River at Thomasville, CO	173	1915-20
09080100	Fryingpan River at Meredith, CO	191	1910-15, 1966-80
09080200	Fryingpan River at Ruedi, CO	226	1959-64
09080300	Rocky Fork Creek near Meredith, CO	12.3	1968-82
09080800	West Sopris Creek near Basalt, CO	14.4	1963-68
09081500	Crystal River at Marble, CO	74.3	1910-15, 1916-17
09081550	Crystal River at Placita, CO	107	1959-73, 1975-77
09082500	Crystal River near Redstone, CO	229	1935-63
09082800	North Thompson Creek near Carbondale, CO	26.8	1963-79
09083000	Thompson Creek near Carbondale, CO	75.7	1950-60, 1964-68
09083700	Prince Creek near Carbondale, CO	3.04	1963-68
09084000	Cattle Creek near Carbondale, CO	31.1	1950-55, 1962-72
09084500	Fourmile Creek near Carbondale, CO	8.10	1941-47
09084600	Fourmile Creek near Glenwood Springs, CO	16.7	1957-65
09085200	Canyon Creek above New Castle, CO	23.8	1969-86
09085300	East Canyon Creek near New Castle, CO	15.1	1969-83
09085400	Possum Creek near New Castle, CO	6.41	1969-82
09085500	Canyon Creek near New Castle, CO	55.0	1954-60
09087500	Elk Creek at New Castle, CO	180	1922-24, 1954-60
09087600	Colorado River at New Castle, CO	6,308	1966-72

DISCONTINUED GAGING STATIONS--Continued

Station number		Drainage area (sq mi)	Period of record (calendar years)
09088000	Baldy Creek near New Castle, CO	15.3	1955-61
09089000	West Divide Creek below Willow Creek near Raven, CO	34.9	1938-47, 1963-70
09090700	East Divide Creek near Silt, CO	40.8	1959-65
09091500	East Rifle Creek near Rifle, CO	34.3	1936-43, 1956-64
09092000	Rifle Creek near Rifle, CO	137	1939-46, 1952-64
09092500	Beaver Creek near Rifle, CO	7.90	1952-82
09092600	Battlement Creek near Parachute, CO	10.5	1956-65
09092800	West Parachute Creek near Parachute, CO	48.1	1957-62
09092830	Northwater Creek near Anvil Points, CO	12.6	1976-83
09092850	East Middle Fork Parachute Creek near Rio Blanco, CO	22.1	1976-83
09092960	East Fork Parachute Creek near Anvil Points, CO	14.5	1976-83
09092970	East Fork Parachute Creek near Rulison, CO	20.4	1976-83
09092980	Ben Good Creek near Rulison, CO	4.04	1976-83
09093000	Parachute Creek near Parachute, CO	141	1948-54, 1964-70, 1975-86
09093500	Parachute Creek at Parachute, CO	198	1921-27, 1948-54, 1975-82
09094200	Roan Creek above Clear Creek near De Beque, CO	151	1962-68
09094400	Clear Creek near De Beque, CO	110	1966-68
09095000	Roan Creek near De Beque, CO	321	1921-26, 1962-72, 1975-81
09095400	Dry Fork near De Beque, CO	109	1974-82
09095526	Government Highline Canal at 16 Road near Loma, CO	--	1975-85
09095528	Lateral No 48 near Mack, CO	--	1973-81
090955285	Government Highline Canal above Camp 7 Spillway near Mack, CO	--	1983-85
09095529	Camp No 7 Spillway near Mack, CO	--	1975-82
09095530	Government Highline Canal near Mack, CO	--	1973-82
09095800	Plateau Creek near Heiberger, CO	18.6	1958-64
09096000	Plateau Creek at Upper Station near Collbran, CO	24.1	1937-43, 1951-58
09096500	Plateau Creek near Collbran, CO	80.4	1921-80
09096800	Buzzard Creek below Owens Creek near Heiberger, CO	49.7	1955-70
09097500	Buzzard Creek near Collbran, CO	143	1921-80
09097600	Brush Creek near Collbran, CO	9.57	1955-67
09098500	Atkinson Creek near Collbran, CO	0.85	1952-55
09099000	East Fork Big Creek near Collbran, CO	4.92	1940-41, 1950-55
09099500	Big Creek at Upper Station near Collbran, CO	20.2	1945-56
09100000	Big Creek near Collbran, CO	27.1	1937-44
09100500	Cottonwood Creek at Upper Station near Molina, CO	14.0	1945-57
09101000	Cottonwood Creek near Molina, CO	17.8	1937-43
09101500	Bull Creek at Upper Station near Molina, CO	9.85	1945-53
09104000	Coon Creek near Mesa, CO	9.35	1937-43
09104500	Mesa Creek near Mesa, CO	6.79	1937-60
09105000	Plateau Creek near Cameo, CO	592	1935-83, 1986
09106000	Colorado River near Palisade, CO	8,738	1901-33
09106104	Kiefer Extension to Grand Valley Canal near Fruita, CO	--	1975-85
09106108	Kiefer Extension to Grand Valley Canal near Loma, CO	--	1975-85
09106200	Lewis Wash near Grand Junction, CO	4.72	1973-79
09108000	Willow Creek at Taylor Park, CO	--	1913-14, 1929-34
09110500	East River near Crested Butte, CO	90.3	1939-51
09111000	Coal Creek near Crested Butte, CO	8.65	1941-46
09111500	Slate River near Crested Butte, CO	70.1	1940-51
09112000	Cement Creek near Crested Butte, CO	26.1	1910-13, 1940-51
09112200	East River below Cement Creek near Crested Butte, CO	235	1963-72, 1979-81
09113000	Castle Creek near Baldwin, CO	20.3	1944-50
09113300	Ohio Creek at Baldwin, CO	47.2	1958-70
09113500	Ohio Creek near Baldwin, CO	121	1940-50, 1958-71, 1979-81
09114000	Ohio Creek near Gunnison, CO	167	1944-50
09115500	Tomichi Creek at Sargents, CO	149	1916-22, 1937-72
09116000	Tomichi Creek near Doyleville, CO	209	1944-50
09117000	Tomichi Creek at Parlin, CO	427	1944-51, 1963-70
09118000	Quartz Creek near Ohio City, CO	106	1937-50, 1959-70
09118500	Cochetopa Creek near Parlin, CO	361	1940-48
09120500	Gunnison River at Iola, CO	2,352	1899, 1903, 1937-1951
09121500	Cebolla Creek near Lake City, CO	25.2	1946-54
09121800	Cebolla Creek near Powderhorn, CO	248	1960-63
09122000	Cebolla Creek at Powderhorn, CO	340	1937-55
09122500	Soap Creek near Sapinero, CO	57.4	1955-66
09123000	Soap Creek at Sapinero, CO	86.0	1910-14, 1945-52
09123400	Lake Fork below mill Gulch near Lake City, CO	57.5	1981-86
09123500	Lake Fork at Lake City, CO	115	1917-24, 1928-30, 1931-37
09124000	Henson Creek at Lake City, CO	83.1	1917-19, 1928-30, 1931-37
09124700	Gunnison River below Blue Mesa Dam, CO	3,453	1963-68
09125000	Curecanti Creek near Sapinero, CO	35.0	1945-72
09126500	Cimarron River at Cimarron, CO	209	1902-05, 1962-67

DISCONTINUED GAGING STATIONS--Continued

Station number		Drainage area (sq mi)	Period of record (calendar years)
09127000	Cimarron River below Squaw Creek at Cimarron, CO	229	1942-52
09127500	Crystal Creek near Maher, CO	42.2	1916-19, 1945-54, 1960-69
09127998	Gunnison River above Gunnison Tunnel, CO	3,965	1905-65
09127999	Gunnison Tunnel near Montrose, CO	3,965	1910-65
09129000	Smith Fork at Crawford, CO	63.1	1954-60
09129500	Iron Creek near Crawford, CO	71.5	1947-52
09129600	Smith Fork near Lazear, CO	166	1976-87
09129800	Clear Fork near Ragged Mountain, CO	38.5	1965-73
09130500	East Muddy Creek near Bardine, CO	133	1934-53
09130600	West Muddy Creek near Ragged Mountain, CO	7.42	1955-65
09130800	West Muddy Creek near Bowie, CO	27.7	1968-74
09131100	Cow Creek near Paonia, CO	12.0	1968-82
09131200	West Muddy Creek near Somerset, CO	49.9	1961-73
09132000	Ruby Anthracite Creek near Floresta, CO	20.7	1938-43, 1954-58
09132050	Anthracite Creek near Somerset, CO	94.6	1977-81
09132700	Main Hubbard Creek near Paonia, CO	1.33	1960-68
09132800	Middle Hubbard Creek near Paonia, CO	1.36	1960-68
09132900	West Hubbard Creek near Paonia, CO	2.34	1960-73
09132920	Hubbard Creek near Bowie, CO	20.7	1968-74
09133000	North Fork Gunnison River near Paonia, CO	653	1921-32
09134050	Minnesota Creek at Paonia, CO	53.5	1976-79
09134200	Cottonwood Creek near Hotchkiss, CO	41.0	1976-79
09134500	Leroux Creek near Cedaredge, CO	34.5	1936-56, 1960-69
09134700	Cow Creek near Cedaredge, CO	7.24	1960-69
09135000	Leroux Creek near Lazear, CO	51.8	1917-26
09136200	Gunnison River near Lazear, CO	5,241	1962-85
09136500	Currant Creek near Cedaredge, CO	42.2	1948-54
09137050	Currant Creek near Read, CO	56.9	1976-87
09137800	Dirty George Creek near Grand Mesa, CO	10.6	1957-69
09139200	Ward Creek near Grand Mesa, CO	12.2	1957-69
09139500	Ward Creek near Cedaredge, CO	20.4	1939-46
09140200	Kiser Creek near Grand Mesa, CO	5.35	1957-69
09140500	Kiser Creek near Cedaredge, CO	10.8	1939-46
09140700	Cottonwood Creek near Grand Mesa, CO	2.15	1957-68
09141000	Cottonwood Creek near Cedaredge, CO	4.39	1939-46
09141200	Youngs Creek near Grand Mesa, CO	10.3	1957-69
09141500	Youngs Creek near Cedaredge, CO	11.3	1939-46
09142000	Ward Creek below Kiser Creek near Cedaredge, CO	52.2	1944-52
09144000	Surface Creek at Eckert, CO	43.6	1939-51
09144200	Tongue Creek at Cory, CO	197	1957-68, 1976-87
09144500	Red Mountain Creek near Iron-ton, CO	18.1	1947-55
09145000	Uncompahgre River At Ouray, CO	42.0	1908, 1910-24
09145500	Canyon Creek at Ouray, CO	25.8	1910-15
09146000	Uncompahgre River below Ouray, CO	75.2	1913-29
09146400	West Fork Dallas Creek near Ridgway, CO	14.1	1955-70
09146500	East Fork Dallas Creek near Ridgway, CO	16.8	1947-1953, 1960-1970
09146550	Beaver Creek near Ridgway, CO	12.2	1960-68
09146600	Pleasant Valley Creek near Noel, CO	8.17	1955-67
09147100	Cow Creek near Ridgway, CO	45.4	1955-73
09149400	Spring Creek near Beaver Hill, CO	41.6	1977-81
09149420	Spring Creek near Montrose, CO	76.6	1977-81
09149900	Potter Creek near Columbine Pass, CO	7.10	1980-81
09149910	Potter Creek near Olathe, CO	26.0	1980-81
09150500	Roubideau Creek at Mouth near Delta, CO	242	1938-54, 1976-83
09151500	Escalante Creek near Delta, CO	209	1922-23, 1970-89
09152000	Kannah Creek near Whitewater, CO	61.9	1917-82
09152600	Orchard Mesa Drain at Grand Junction, CO	3.70	1973-83
09152650	Leach Creek at Durham, CO	24.8	1973-83
09152900	Adobe Creek near Fruita, CO	15.4	1973-83
09153000	Colorado River near Fruita, CO	17,100	1907-23
09153270	Big Salt Wash at Fruita, CO	142	1973-77
09153300	Reed Wash near Loma, CO	29.3	1973-83
09153330	West Salt Creek near Carbonera, CO	95.6	1979-82
09153400	West Salt Creek near Mack, CO	168	1973-83
09163050	Badger Wash near Mack, CO	6.51	1973-82
09163310	East Salt Creek near Mack, CO	197	1973-82
09163340	Mack Wash near Mack, CO	15.9	1973-82
09163490	Salt Creek near Mack, CO	436	1973-83
09163570	Hay Press Creek above Fruita Reservoir 3 near Glade Park, CO	0.77	1983-88
09166000	West Fork Dolores River near Stoner, CO	162	1941-44
09167000	Lost Canyon Creek at Dolores, CO	73.5	1922-27, 1941-48
09167450	Plateau Creek near Mouth near Dolores, CO	83.0	1982-83
09167500	Dolores River near McPhee, CO	817	1938-52
09168100	Disappointment Creek near Dove Creek, CO	147	1957-86
09168800	Big Gypsum Creek near Slick Rock, CO	43.9	1979-81
09170500	West Paradox Creek near Paradox, CO	23.6	1944-52
09170800	West Paradox Creek above Bedrock, CO	53.3	1971-73

DISCONTINUED GAGING STATIONS--Continued

Station number	Drainage area (sq mi)	Period of record (calendar years)
09171000	West Paradox Creek near Bedrock, CO	55.3 1944-52
09171200	San Miguel River near Telluride, CO	42.8 1959-65
09171500	San Miguel River at Fall Creek, CO	167 1895-99, 1910
09172000	Fall Creek near Fall Creek, CO	33.4 1941-59
09172100	Leopard Creek at Noel, CO	9.03 1955-63
09172600	Salgado Creek near Norwood, CO	-- 1976-80
09172700	Gurley Ditch near Norwood, CO	-- 1976-80
09172800	West Beaver Creek near Norwood, CO	-- 1976-80
09173000	Beaver Creek near Norwood, CO	40.6 1941-61, 1962-67, 1975-81
09173500	Horsefly Creek near Sams, CO	28.8 1942-51
09174000	San Miguel River near Nucla, CO	649 1953-62
09174500	Cottonwood Creek near Nucla, CO	38.8 1942-51
09174700	West Naturita Creek at Upper Station near Norwood, CO	7.31 1976-80
09175000	West Naturita Creek near Norwood, CO	53.0 1940-52, 1975-80
09175200	Lilylands Canal near Norwood, CO	-- 1976-80
09175400	Maverick Draw near Norwood, CO	41.3 1976-80
09175500	San Miguel River at Naturita, CO	1,069 1917-29, 1940-81
09176500	Tabeguache Creek near Nucla, CO	16.9 1946-53
09177500	Taylor Creek near Gatemat, CO	15.4 1944-67
09178000	Deep Creek near Paradox, CO	4.31 1944-53
09178500	Geyser Creek near Paradox, CO	-- 1944-51
09179000	Roc Creek near Urantium CO	75.8 1944-52
09179200	Salt Creek near Gateway, CO	31.2 1979-85
09179500	Dolores River at Gateway, CO	4,347 1936-54
09236000	Bear River near Toponas, CO	23.0 1952-65, 1966-86
09236500	Bear River near Yampa, CO	41.6 1939-44
09237800	Service Creek near Oak Creek, CO	38.2 1965-73
09238000	Oak Creek near Oak Creek, CO	14.0 1952-57
09238300	North Fork Walton Creek near Rabbit Ears Pass, CO	0.71 1972-75
09238350	Fishhook Creek near Rabbit Ears Pass, CO	6.45 1972-75
09238500	Walton Creek near Steamboat Springs, CO	42.4 1920-22, 1965-73, 1978-87
09238700	Fish Creek Tributary above Long Lake near Buffalo Pass, CO	0.43 1984-86
09239400	Spring Creek near Steamboat Springs, CO	6.96 1965-72
09240500	ELK River at Hinman Park, CO	61.0 1911-18
09240800	South Fork Elk River near Clark, CO	33.7 1966-73
09244100	Fish Creek near Milner, CO	216 1955-73
09244300	Grassy Creek near Mount Harris, CO	25.8 1958-66
09244400	Yampa River near Hayden, CO	1,430 1965-72
09244405	Gibraltar Canal near Hayden, CO	-- 1965-72
09244410	Yampa River below Diversion near Hayden, CO	1,430 1965-86
09244415	Sage Creek above Sage Creek Reservoir near Hayden, CO	4.17 1980-83
09244460	Watering Trough Gulch near Hayden, CO	2.65 1977-81
09244464	Hubberson Gulch near Hayden, CO	8.08 1977-81
09244470	Stokes Gulch near Hayden, CO	13.6 1976-81
09244500	Elkhead Creek near Clark, CO	45.4 1942-44, 1958-73
09245500	North Fork Elkhead Creek near Elkhead, CO	21.0 1910, 1920, 1958-1973
09246500	Elkhead Creek near Craig, CO	249 1906, 1909-18
09246900	Fortification Creek near Craig, CO	34.3 1955-60
09247000	Fortification Creek at Craig, CO	258 1903-06, 1909-18, 1943-47
09247500	Yampa River at Craig, CO	1,730 1901-06, 1909-16
09248500	East Fork of Williams Fork near Willow Creek, CO	96.0 1943-47
09248600	East Fork of Williams Fork above Willow Creek, CO	108 1956-72
09249000	East Fork of Williams Fork near Pagoda, CO	150 1953-71
09249200	South Fork of Williams Fork near Pagoda, CO	46.7 1965-79
09249450	Waddle Creek near Pagoda, CO	5.24 1985-86
09249455	Deep Rock Gulch near Hamilton, CO	3.53 1985-86
09249500	Williams Fork at Hamilton, CO	341 1904-06, 1909-27
09249700	Morapos Creek near Hamilton, CO	13.7 1965-67
09250000	Milk Creek near Thornburgh, CO	65.0 1952-1986
09250400	Good Spring Creek at Axial, CO	40.0 1975-1978
09250610	Jubb Creek near Axial, CO	7.53 1975-81
09250700	Morgan Gulch near Axial, CO	25.6 1980-81
09251500	Middle Fork Little Snake River near Battle Creek, CO	120 1912-22
09252500	South Fork Little Snake River near Battle Creek, CO	46.0 1912-20
09253500	Battle Creek near Slater, CO	285 1942-51
09254500	Slater Fork at Baxter Ranch near Slater, CO	80.0 1911-20, 1922
09259950	Little Snake River above Lily, CO	-- 1950-69
09302400	North Fork White River below Trappers Lake, CO	19.5 1956-65
09302420	North Fork White River above Ripple Creek near Trappers Lake, CO	62.5 1965-73
09302450	Lost Creek near Buford, CO	21.5 1964-89
09302500	Marvine Creek near Buford, CO	59.7 1903-06, 1973-84
09302800	North Fork White River near Buford, CO	220 1903-06, 1956-72
09303340	Patterson Creek near Budges Resort, CO	11.2 1976-77
09303320	Wagonwheel Creek at Budges Resort, CO	7.36 1975-89
09304100	Big Beaver Creek near Buford, CO	34.1 1955-64
09304150	Miller Creek near Meeker, CO	57.6 1970-79

DISCONTINUED GAGING STATIONS--Continued

Station number	Drainage area (sq mi)	Period of record (calendar years)	
09304300	Coal Creek near Meeker, CO	25.1	1957-68
09304600	White River at Meeker, CO	808	1978-85
09305500	Piceance Creek at Rio Blanco, CO	8.97	1952-57
09306015	Middle Fork Stewart Gulch near Rio Blanco, CO	24.0	1974-76, 1977-82
09306022	Stewart Gulch above West Fork near Rio Blanco, CO	44.0	1976-85
09306025	West Fork Stewart Gulch near Rio Blanco, CO	14.2	1974-76, 1977-82
09306028	West Fork Stewart Gulch at Mouth near Rio Blanco, CO	15.7	1974-82
09306033	Sorghum Gulch near Rio Blanco, CO	1.22	1974-76, 1977-82
09306036	Sorghum Gulch at Mouth near Rio Blanco, CO	3.62	1974-86
09306039	Cottonwood Gulch near Rio Blanco, CO	1.20	1974-85
09306045	Piceance Creek below Gardenhire Gulch near Rio Blanco, CO	255	1980-82, 1985
09306050	Scandard Gulch near Rio Blanco, CO	6.61	1974-76, 1978-82
09306052	Scandard Gulch at Mouth near Rio Blanco, CO	7.97	1974-85
09306058	Willow Creek near Rio Blanco, CO	48.4	1974-85
09306061	Piceance Creek above Hunter Creek near Rio Blanco, CO	309	1974-87
09306175	Black Sulphur Creek near Rio Blanco, CO	103	1975-83
09306202	Horse Draw near Rangely, CO	1.47	1977-81
09306203	Horse Draw at Mouth near Rangely, CO	2.87	1977-81
09306224	White River above Crooked Wash near White River City, CO	1,821	1982-89
09306230	Stake Springs Draw near Rangely, CO	26.1	1974-77
09306235	Corral Gulch below Water Gulch near Rangely, CO	8.61	1974-89
09306237	Dry Fork near Rangely, CO	2.74	1974-82
09306240	Box Elder Gulch near Rangely, CO	9.21	1974-85
09306241	Box Elder Gulch Tributary near Rangely, CO	2.39	1975-82
09306244	Corral Gulch at 84 Ranch, CO	37.8	1975-77
09306246	Yellow Creek Tributary near 84 Ranch, CO	5.53	1975-77
09306248	Duck Creek at Upper Station near 84 Ranch, CO	39.1	1975-77
09306250	Duck Creek near 84 Ranch, CO	50.0	1975-77
09306300	White River above Rangely, CO	2,773	1972-82
09306380	Douglas Creek at Rangely, CO	425	1976-78
09340000	East Fork San Juan River near Pagosa Springs, CO	86.9	1935-80
09340500	West Fork San Juan River above Borns Lake near Pagosa Springs, CO	41.2	1937-53
09341200	Wolf Creek near Pagosa Springs, CO	14.0	1968-75
09341300	Wolf Creek at Wolf Creek Camp Ground near Pagosa Springs, CO	18.0	1984-87
09341350	Windy Pass Creek near Pagosa Springs, CO	1.41	1984-87
09341500	West Fork San Juan River near Pagosa Springs, CO	87.9	1935-60, 1984-87
09342000	Turkey Creek near Pagosa Springs, CO	23.0	1937-49
09343000	Rio Blanco near Pagosa Springs, CO	58.0	1935-71
09343500	Rito Blanco near Pagosa Springs, CO	23.3	1935-52
09344300	Navajo River above Chromo, CO	96.4	1956-70
09345500	Little Navajo River at Chromo, CO	21.9	1935-52
09347200	Middle Fork Piedra River near Pagosa Springs, CO	32.2	1969-75
09347205	Middle Fork Piedra River near Dyke, CO	34.1	1978-84
09347500	Piedra River at Bridge Ranger Station near Pagosa Springs, CO	82.3	1936-41, 1946-54
09348500	Williams Creek near Bridge Ranger Station near Pagosa Springs, CO	43.7	1936-41, 1946-49
09349000	Weminuche Creek near Bridge Ranger Station near Pagosa Springs, CO	53.4	1936-41, 1946-49
09349500	Piedra River near Piedra, CO	371	1911-12, 1938-73
09353500	Los Pinos River near Bayfield, CO	270	1927-86
09357500	Animas River at Howardsville, CO	55.9	1935-82
09358900	Mineral Creek above Silverton, CO	11.0	1968-75
09359000	Mineral Creek near Silverton, CO	43.9	1935-49
09359100	Lime Creek near Silverton, CO	33.9	1956-61
09359500	Animas River above Tacoma, CO	348	1945-56
09361000	Hermosa Creek near Hermosa, CO	172	1911, 1912-14, 1919-28, 1939-1980
09361200	Falls Creek near Durango, CO	7.18	1959-65
09362000	Lightner Creek near Durango, CO	66.0	1927-49
09362900	Florida River near Hermosa, CO	68.8	1955-63
09363000	Florida River near Durango, CO	97.4	1899, 1901-03, 1910-12, 1917-1924, 1926-60
09363050	Florida River below Florida Farmers Ditch near Durango, CO	107	1967-82
09363100	Salt Creek near Oxford, CO	17.7	1956-63, 1967-83
09363200	Florida River at Bondad, CO	221	1956-63, 1967-83
09366000	Cherry Creek near Red Mesa, CO	66.0	1928-50
09368500	West Mancos River near Mancos, CO	39.4	1910-11, 1938-53
09369000	East Mancos River near Mancos, CO	11.9	1937-51
09369500	Middle Mancos River near Mancos, CO	12.1	1937-51
09370000	Mancos River near Mancos, CO	71.5	1921, 1931-38
09370800	Mancos River near Cortez, CO	302	1976-79
09370820	Mancos River below Johnson Canyon near Cortez, CO	320	1979-82
09371400	Hartman Draw at Cortez, CO	34.0	1978-86
09371420	McElmo Creek above Alkali Canyon near Cortez, CO	147	1972-86
09371492	Mud Creek at State Highway 32 near Cortez, CO	33.6	1981-86
09371495	Mud Creek near Cortez, CO	33.6	1978-81
09371700	McElmo Creek below Cortez, CO	283	1972-83

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS

The following stations were discontinued as continuous water-quality stations prior to the 1989 water year. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station.

Station number	Station name	Drainage area (sq mi)	Type of record	Period of record (water years)
09037500	Williams Fork near Parshall, CO	184	Temp., S.C.	1986-87
09038500	Williams Fork below Williams Fork Reservoir, CO	230	Temp., S.C.	1985-87
09049200	West Tenmile Creek at Copper Mountain, CO	21.0	Sed.	1973-79
09052500	Boulder Creek near Dillon, CO	9.89	Temp., S.C.	1982
09053500	Blue River above Green Mountain Reservoir, CO	511	Temp. S.C.	1986 1986-87
09057500	Blue River below Green Mountain Reservoir, CO	599	Temp., S.C.	1986-87
09060550	Rock Creek at Crater, CO	72.6	Temp., S.C.	1986-87
09066050	Black Gore Creek near Vail, CO	19.6	Sed.	1973-79
09066250	Gore Creek at Vail, CO	57.3	Sed.	1973-79
09070500	Colorado River near Dotsero, CO	4,394	Temp., S.C. Sed.	1980-84 1959-61
09071100	Colorado River near Glenwood Springs, CO	4,560	Temp. S.C.	1969-70, 1980-85 1980-85
09072500	Colorado River at Glenwood Springs, CO	4,558	Temp. Sed.	1954-58 1959-61
09073700	Hunter Creek above Midway Creek near Aspen, CO	6.18	Temp., S.C.	1976-77
09085000	Roaring Fork River at Glenwood Springs, CO	1,451	Temp., S.C. Sed.	1980-84 1959-61
09085100	Colorado River below Glenwood Springs, CO	6,013	Temp., S.C.	1980-84
09092850	East Middle Fork Parachute Cr nr Rio Blanco, CO	22.1	Temp., S.C. Sed.	1976-82 1977-82
09092970	East Fork Parachute Creek near Rulison, CO	20.4	Temp. S.C. Sed.	1977-78, 1980-83 1977-83 1978, 1980-83
09093000	Parachute Creek near Parachute, CO	141	Temp., S.C. Sed.	1975-80 1974-75
09093500	Parachute Creek at Parachute, CO	198	Temp., S.C. Sed.	1975-80 1974-82
09093700	Colorado River near De Beque, CO	7,370	Temp., S.C. Sed.	1973-82 1974-76
09095000	Roan Creek near De Beque, CO	321	Temp., S.C. Sed.	1975-80 1975-81
09095530	Government Highline Canal near Mack, CO	--	Temp. S.C.	1973-80 1974-80
09105000	Plateau Creek near Cameo, CO	592	Temp., S.C.	1971-75
09106200	Lewis Wash near Grand Junction, CO	4.72	Temp., S.C.	1973-77
09149500	Uncompahgre River at Delta, CO	1,115	Sed.	1959
09149900	Potter Creek near Columbine Pass, CO	7.10	Temp., S.C.	1981
09149910	Potter Creek near Olathe, CO	26.0	Temp., S.C.	1981
09152600	Orchard Mesa Drain at Grand Junction, CO	3.70	Temp., S.C.	1973-77
09152650	Leach Creek at Durham, CO	24.8	Temp., S.C.	1973-77
09152900	Adobe Creek near Fruita, CO	15.4	Temp., S.C.	1973-80
09153270	Big Salt Wash at Fruita, CO	142	Temp., S.C.	1973-77
09153300	Reed Wash near Loma, CO	29.3	Temp., S.C.	1973-83
09153330	West Salt Creek near Carbonera, CO	95.6	Temp., S.C.	1981-82
09153400	West Salt Creek near Mack, CO	168	Temp., S.C.	1973-84
09160000	Badger Wash Observation Res 4-A near Mack, CO	.02	Temp., S.C.	1981
09160500	Badger Wash Observation Res 12 near Mack, CO	.09	Temp., S.C.	1981-82
09161000	Badger Wash Observation Res 2-A near Mack, CO	.15	Temp., S.C.	1981
09163050	Badger Wash near Mack, CO	6.51	Temp., S.C.	1973-80
09163310	East Salt Creek near Mack, CO	197	Temp., S.C.	1973-82
09163340	Mack Wash near Mack, CO	15.9	Temp. S.C.	1973-82 1974-82
09163490	Salt Creek near Mack, CO	436	Temp., S.C.	1973-83
09168100	Disappointment Creek near Dove Creek, CO	147	Temp., S.C.	1984
09168800	Big Gypsum Creek near Slick Rock, CO	43.9	Temp., S.C.	1981
09171070	Dolores River below W. Paradox Cr nr Bedrock, CO	2,144	Temp., S.C.	1986-87
09179200	Salt Creek near Gateway, CO	31.2	Temp., S.C.	1981-85
09179500	Dolores River at Gateway, CO	4,347	Temp.	1949-52
09237500	Yampa River near Oak Creek, CO	227	Sed.	1985-88
09243700	Middle Creek near Oak Creek, CO	23.5	Temp., S.C.	1976-81
09243900	Foidel Creek at Mouth near Oak Creek, CO	17.5	Temp., S.C. Sed.	1976-81 1978-81
09244415	Sage Creek above Sage Creek Res. near Hayden, CO	4.17	Temp., S.C.	1981-83
09244460	Watering Trough Gulch near Hayden, CO	2.65	Temp., S.C.	1979-81
09244464	Hubberson Gulch near Hayden, CO	8.08	Temp., S.C.	1979-81
09244470	Stokes Gulch near Hayden, CO	13.6	Temp., S.C., Sed.	1978-81
09250400	Good Spring Creek at Axial, CO	40.0	Temp. S.C.	1975-78 1974-78
09250507	Wilson Creek above Taylor Creek near Axial, CO	20.0	Temp., S.C., Sed.	1980-81
09250510	Taylor Creek at Mouth near Axial, CO	7.22	Temp., S.C.	1976-81
09250600	Wilson Creek near Axial, CO	27.4	Temp. S.C. Sed.	1975-80 1974-80 1976-80
09250610	Jubb Creek near Axial, CO	7.53	Temp., S.C.	1976-81
09250700	Morgan Gulch near Axial, CO	25.6	Temp., S.C.	1980-81
09259950	Little Snake River above Lily, CO	3,730	Temp., S.C. Sed.	1950-69 1958-64

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS--Continued

Station number	Station name	Drainage area (sq mi)	Type of record	Period of record (water years)
09260000	Little Snake River near Lily, CO	3,730	Temp., S.C. Sed.	1975-85 1958-64
09260050	Yampa River at Deerlodge Park, CO	7,660	Temp., S.C.	1977-82
09304200	White River above Coal Creek, near Meeker, CO	648	Temp., S.C.	1978-84
09304500	White River near Meeker, CO	755	Temp., S.C.	1973-74
09304600	White River at Meeker, CO	808	Temp., S.C.	1978-85
09304800	White River below Meeker, CO	1,024	Temp., S.C.	1978-85
09306007	Piceance Creek below Rio Blanco, CO	177	Temp., S.C., Sed	1974-85
09306015	Middle Fork Stewart Gulch near Rio Blanco, CO	24.0	Temp., S.C. Sed.	1976, 1981 1976
09306022	Stewart Gulch above West Fork near Rio Blanco, CO	44.0	Temp., S.C., Sed.	1974-82
09306025	West Fork Stewart Gulch near Rio Blanco, CO	14.2	Temp. S.C. Sed.	1974-1976, 1980-81 1975-76, 1980-81 1974-76
09306028	W.F. Stewart Gulch at Mouth near Rio Blanco, CO	15.7	Temp. S.C. Sed.	1980-81 1977, 1980-81 1975-76, 1980-81
09306033	Sorghum Gulch near Rio Blanco, CO	1.22	Temp., S.C. Sed.	1975-76, 1980 1975-76
09306036	Sorghum Gulch at mouth near Rio Blanco, CO	3.62	Temp., S.C. Sed.	1976, 1978, 1980 1975-77, 1982
09306039	Cottonwood Gulch near Rio Blanco, CO	1.20	Temp., S.C. Sed.	1976-78, 1980 1974-77, 1980
09306042	Piceance Creek Tributary near Rio Blanco, CO	1.06	Temp., S.C. Sed.	1974-86 1974-82
09306045	Piceance Cr bl Gardenhire Gulch nr Rio Blanco, CO	255	Temp., S.C.	1980-81
09306050	Scandard Gulch near Rio Blanco, CO	6.61	Temp., S.C. Sed.	1980 1975-76
09306052	Scandard Gulch at Mouth near Rio Blanco, CO	7.97	Temp., S.C. Sed.	1976, 1978, 1980 1974-76, 1980
09306058	Willow Creek near Rio Blanco, CO	48.4	Temp., S.C. pH, D.O. Sed.	1974-82 1976-82 1974-82
09306061	Piceance Creek above Hunter Cr nr Rio Blanco, CO	309	Temp., S.C., Sed. pH, D.O.	1974-85 1974-84
09306175	Black Sulphur Creek near Rio Blanco, CO	103	Temp., S.C., Sed.	1975-81
09306200	Piceance Creek below Ryan Gulch nr Rio Blanco, CO	506	Sed.	1972-83
09306202	Horse Draw near Rangely, CO	1.47	Sed.	1980
09306203	Horse Draw at Mouth near Rangely, CO	2.87	Temp., S.C. Sed.	1980 1980-81
09306222	Piceance Creek at White River, CO	652	Temp., S.C., Sed.	1974-83
09306230	Stake Springs Draw near Rangely, CO	26.1	Temp., S.C., Sed.	1977
09306235	Corral Gulch below Water Gulch near Rangely, CO	8.61	Temp., S.C. Sed.	1975-85 1974-82
09306237	Dry Fork near Rangely, CO	2.74	Temp., S.C. Sed.	1977, 1979, 1982 1975, 1977, 1979, 1981-82
09306240	Box Elder Gulch near Rangely, CO	9.21	Temp., S.C. Sed.	1975-85 1975-82
09306241	Box Elder Gulch Tributary near Rangely, CO	2.39	Temp. S.C. Sed.	1976, 1980-81 1976-77, 1981 1975, 1980, 1982
09306242	Corral Gulch near Rangely, CO	31.6	Temp., S.C. Sed.	1975-87 1974-85
09306244	Corral Gulch at 84 Ranch, CO	37.8	Temp., S.C. Sed.	1975-77
09306246	Yellow Creek Tributary near 84 Ranch, CO	5.53	Sed.	1976
09306248	Duck Creek at Upper Station near 84 Ranch, CO	39.1	Sed.	1976
09306250	Duck Creek near 84 Ranch, CO	50.0	Temp., S.C.	1977
09306255	Yellow Creek near White River, CO	262	Temp., S.C. Sed.	1974-82
09341350	Windy Pass Creek near Pagosa Springs, CO	1.41	Sed.	1986
09341500	West Fork San Juan River near Pagosa Springs, CO	87.9	Sed.	1985-87
09343000	Rio Blanco near Pagosa Springs, CO	58.0	Sed.	1961-62
09344300	Navajo River above Chromo, CO	96.4	Sed.	1961-62
09352900	Vallecito Creek near Bayfield, CO	72.1	Temp.	1962-82
09370800	Mancos River near Cortez, CO	302	Temp., S.C.	1976-79
09370820	Mancos River below Johnson Canyon nr Cortez, CO	320	Temp., S.C.	1979-82
09371000	Mancos River near Towaoc, CO	526	Sed.	1961
09371400	Hartman Craw at Cortez, CO	34.0	Temp., S.C.	1978-81
09371500	McElmo Creek near Cortez, CO	230	Temp., S.C.	1982-87

Type of record: Temp. (temperature), S.C. (specific conductance), pH (pH), D.O. (dissolved oxygen), Sed. (sediment).

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COLORADO RIVER MAIN STEM

09010500 COLORADO RIVER BELOW BAKER GULCH, NEAR GRAND LAKE, CO

LOCATION.--Lat 40°19'33", long 105°51'22", in NE¼NW¼ sec.12, T.4 N., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 500 ft downstream from Baker Gulch, 1.0 mi upstream from Bowen Gulch, and 5.5 mi northwest of town of Grand Lake.

DRAINAGE AREA.--53.4 mi².

PERIOD OF RECORD.--May 1953 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-4, Oct. 15 to Nov. 8, Nov. 11-14, Nov. 25 to Apr. 25, and Aug. 12 to Sept. 26. Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station by Grand River ditch (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--37 years, 62.9 ft³/s; 45,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 976 ft³/s, June 30, 1957, gage height, 7.19 ft; maximum gage height, 7.30 ft, June 25, 1971; minimum daily discharge, 3.0 ft³/s, Jan. 13, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 575 ft³/s at 0300 June 12, gage height, 6.75 ft; minimum daily, 5.0 ft³/s, Mar. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	10	8.6	8.5	7.8	6.0	6.3	30	238	110	24	15
2	14	9.0	8.9	8.4	7.7	6.0	7.2	37	211	100	25	19
3	14	10	9.0	8.4	7.8	6.0	9.6	42	213	93	24	16
4	14	12	9.0	8.4	8.0	6.4	13	38	290	93	23	14
5	14	11	9.0	8.4	8.0	6.4	13	40	356	95	23	13
6	13	11	9.0	8.4	7.3	5.0	15	51	372	90	22	15
7	13	13	8.9	8.4	6.8	5.6	14	69	383	81	21	15
8	13	12	8.8	8.4	6.4	6.1	12	73	423	111	20	14
9	13	9.9	8.7	8.5	6.3	6.1	13	59	430	106	22	13
10	13	10	8.6	8.7	6.4	6.2	12	56	439	85	21	13
11	12	10	8.5	8.8	6.7	6.2	11	66	465	71	21	12
12	12	9.7	8.4	9.0	7.1	6.2	11	59	504	63	22	11
13	12	9.3	8.3	9.0	6.8	6.8	10	61	371	57	23	11
14	12	8.7	8.2	9.0	6.9	6.3	13	59	370	54	20	11
15	13	8.2	8.2	8.6	6.0	6.0	15	72	352	50	20	11
16	14	7.8	8.2	8.2	6.2	5.7	24	68	295	49	23	11
17	13	9.7	8.2	7.8	6.4	5.4	34	59	255	48	19	14
18	11	8.6	8.2	8.1	6.4	5.4	35	68	268	43	20	19
19	11	9.3	8.2	8.6	6.4	5.4	38	76	270	47	20	18
20	12	9.8	8.2	8.3	6.4	6.0	43	79	236	48	18	16
21	13	9.9	8.2	8.3	6.8	6.7	58	76	232	53	18	16
22	12	8.6	8.2	8.3	6.6	7.5	72	98	225	42	17	16
23	12	8.1	8.2	8.3	6.4	7.0	74	140	222	38	16	16
24	12	8.9	8.2	8.3	6.4	7.0	64	201	212	37	15	15
25	11	8.9	8.3	8.3	6.4	7.3	57	240	195	40	14	15
26	12	8.7	8.4	8.3	6.4	8.2	49	229	182	34	13	20
27	11	8.6	8.4	7.9	6.4	7.0	41	206	165	31	12	18
28	11	8.4	8.4	7.4	6.0	6.8	38	221	152	31	12	19
29	10	8.4	8.6	7.2	---	6.6	37	273	137	34	11	26
30	10	8.4	8.8	7.2	---	6.8	35	213	122	29	11	23
31	11	---	8.6	8.0	---	6.4	---	242	---	26	11	---
TOTAL	382	285.9	263.4	257.4	189.2	196.5	874.1	3301	8585	1889	581	465
MEAN	12.3	9.53	8.50	8.30	6.76	6.34	29.1	106	286	60.9	18.7	15.5
MAX	14	13	9.0	9.0	8.0	8.2	74	273	504	111	25	26
MIN	10	7.8	8.2	7.2	6.0	5.0	6.3	30	122	26	11	11
AC-FT	758	567	522	511	375	390	1730	6550	17030	3750	1150	922

CAL YR 1989 TOTAL 12963.0 MEAN 35.5 MAX 260 MIN 4.8 AC-FT 25710
WTR YR 1990 TOTAL 17269.5 MEAN 47.3 MAX 504 MIN 5.0 AC-FT 34250

GRAND LAKE OUTLET BASIN

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO

LOCATION.--Lat 40°19'40", long 105°34'39", in SW¼NW¼ sec.9, T.4 N., R.73 W., Larimer County, Hydrologic Unit 10190006, on right bank at upstream end of Aspen Creek siphon, 700 ft downstream from east portal, and 4.5 mi southwest of Estes Park.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year (monthly discharge only for August and September 1947).

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 8,250 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1950, water-stage recorder and Parshall flume at different datum. Oct. 1, 1950, to Sept. 30, 1952, water-stage recorder and Cippoletti weir at different datum.

REMARKS.--No estimated daily discharges. Records good. This is a transmountain diversion from Grand Lake and Shadow Mountain Lake for power and irrigation developments in the South Platte River basin as part of the Colorado-Big Thompson project. Diversion point is at west portal near town of Grand Lake, 13.35 mi west of east portal.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--44 years, 284 ft³/s; 205,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 592 ft³/s, June 30, 1962; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	504	543	548	527	539	538	.00	199	44	120	98	103
2	328	543	545	521	539	538	.00	219	.00	130	97	100
3	211	536	547	515	540	537	.00	201	81	138	95	98
4	404	521	545	517	540	537	.00	194	148	271	77	134
5	465	519	540	521	539	535	.00	199	.00	133	81	134
6	508	521	538	527	544	533	.00	198	.00	134	78	122
7	551	520	543	527	540	536	.00	201	.00	136	68	132
8	232	522	549	535	538	531	.00	207	.00	.70	88	5.7
9	14	522	545	541	541	487	.00	198	.00	3.6	166	10
10	14	523	543	540	542	487	.00	196	.00	144	167	10
11	105	524	544	535	541	487	.00	197	.00	186	172	10
12	544	522	552	534	537	504	.00	198	.00	154	199	10
13	546	526	548	535	534	536	130	194	.00	197	202	10
14	545	534	547	535	533	536	5.9	195	88	197	202	278
15	543	536	545	535	535	537	.08	201	.00	196	201	338
16	544	536	543	535	535	398	6.9	199	.00	241	201	340
17	544	537	541	528	537	.47	13	198	238	340	200	259
18	546	541	543	535	540	.22	9.6	200	36	374	123	109
19	489	544	547	536	540	.20	9.7	199	73	339	6.2	96
20	541	545	549	537	540	.18	105	198	176	101	47	94
21	543	550	518	537	538	.18	15	214	163	540	82	92
22	545	548	545	539	538	.13	10	123	102	99	108	108
23	544	547	543	536	535	.20	10	116	88	92	112	98
24	543	548	541	534	538	.18	251	45	88	91	108	132
25	543	548	546	537	535	.17	248	50	40	92	90	153
26	508	549	541	536	537	.18	315	52	40	90	107	150
27	549	544	538	536	538	.10	393	241	55	90	103	150
28	552	547	530	535	537	.00	364	45	41	98	49	150
29	551	548	525	535	---	.00	202	44	63	111	4.3	128
30	431	545	525	533	---	.88	202	.00	119	100	105	108
31	463	---	527	537	---	.00	---	43	---	99	107	---
TOTAL	13950	16089	16781	16511	15070	8260.09	2290.18	4964.00	1683.00	5037.30	3543.5	3661.7
MEAN	450	536	541	533	538	266	76.3	160	56.1	162	114	122
MAX	552	550	552	541	544	538	393	241	238	540	202	340
MIN	14	519	518	515	533	.00	.00	.00	.00	.70	4.3	5.7
AC-FT	27670	31910	33290	32750	29890	16380	4540	9850	3340	9990	7030	7260

CAL YR 1989 TOTAL 147906.66 MEAN 405 MAX 552 MIN .76 AC-FT 293400
WTR YR 1990 TOTAL 107840.77 MEAN 295 MAX 552 MIN .00 AC-FT 213900

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1970 to current year.

REMARKS.--Field data collected prior to 1974 water year are available in district office.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 14...	0910	551	52	7.1	7.0	--	22	6.8	1.2	2.2	0.2
JAN 24...	0925	542	76	7.4	4.0	8.5	30	9.2	1.8	3.0	0.2
MAR 19...	1045	0.40	84	7.9	5.5	8.8	30	9.2	1.6	5.3	0.4
MAY 16...	0945	387	58	7.7	6.0	8.3	28	9.1	1.3	2.2	0.2
JUL 25...	0830	192	23	6.6	16.0	7.5	8	2.5	0.41	1.0	0.2
SEP 10...	1300	7.4	34	6.9	16.5	7.4	12	3.9	0.6	1.7	0.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
NOV 14...	0.8	23	3.0	0.4	0.1	4.4	--	33	0.14	149
JAN 24...	0.9	30	7.0	0.6	0.1	4.1	54	45	0.07	79.0
MAR 19...	1.3	36	4.5	1.1	0.1	4.4	50	50	0.07	0.05
MAY 16...	0.8	25	3.3	0.6	<0.1	4.5	32	37	0.04	33.4
JUL 25...	0.3	9.2	1.5	0.2	<0.1	3.2	16	15	0.02	8.29
SEP 10...	0.4	14	1.9	0.6	<0.1	3.7	18	21	0.02	0.36

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
NOV 14...	<0.01	<0.10	<0.01	<0.01	--	0.3	0.04	0.03	0.03	0.09
JAN 24...	<0.01	<0.10	0.02	0.02	0.28	0.3	0.03	0.02	0.01	0.03
MAR 19...	<0.01	0.10	0.01	0.01	0.29	0.3	0.05	0.04	0.05	0.15
MAY 16...	<0.01	<0.10	<0.01	0.01	--	<0.2	0.02	<0.01	0.02	0.06
JUL 25...	<0.01	<0.10	<0.01	0.02	--	0.3	<0.01	0.02	<0.01	--
SEP 10...	<0.01	<0.10	0.03	<0.01	0.27	0.3	0.02	0.02	<0.01	--

GRAND LAKE OUTLET BASIN

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 14...	0910	6	<0.5	30	<1.0	<5	<3	<10	17
JAN 24...	0925	8	<0.5	<10	<1.0	<5	<3	<10	9
MAR 19...	1045	7	<0.5	<10	2.0	<5	<3	<10	19
MAY 16...	0945	4	<0.5	<10	<1.0	<5	<3	<10	32
JUL 25...	0830	3	<0.5	10	<1.0	<5	<3	<10	30
SEP 10...	1300	3	<0.5	<10	<1.0	<5	<3	<10	16

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 14...	<10	<4	1	<10	<10	<1.0	40	<6	<3
JAN 24...	<10	<4	<1	<10	<10	<1.0	60	<6	7
MAR 19...	<10	<4	6	<10	<10	<1.0	53	<6	17
MAY 16...	<10	<4	4	<10	<10	<1.0	43	<6	3
JUL 25...	<10	<4	2	<10	<10	<1.0	14	<6	9
SEP 10...	<10	<4	4	<10	<10	<1.0	21	<6	16

09014500 SHADOW MOUNTAIN LAKE NEAR GRAND LAKE, CO--Continued

LOCATION.--Lat 40°12'26", long 105°50'27", in SW¼NW¼ sec.19, T.3 N., R.75 W., Grand County, Hydrologic Unit 14010001, in gate house on left side of outlet gates near center of Shadow Mountain Dam on Colorado River, 1.0 mi upstream from Pole Creek and 3.2 mi south of town of Grand Lake.

DRAINAGE AREA.--185 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1947 to current year. Prior to October 1960, published as Shadow Mountain Reservoir near Grand Lake.

REVISED RECORDS.--WSP 1149: 1947-48. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929. Supplementary water-stage recorder on Grand Lake, 800 ft north of outlet gates and 2.9 mi north of Shadow Mountain Dam.

REMARKS.--Lake is formed by earth and rockfill dam and dikes. Storage began in April 1947. Capacity, 17,860 acre-ft, including usable capacity of Grand Lake above elevation 8,365 ft, between elevation 8,347 ft, sill of outlet gate, and 8,367 ft, maximum water surface. Dead storage in Shadow Mountain Lake, 506 acre-ft. Dead storage in Grand Lake not determined. Shadow Mountain Lake is used for stabilization of water level in Grand Lake. Usable capacity for diversion through Alva B. Adams tunnel, 3,660 acre-ft between elevations 8,365 ft, crest of tunnel inlet and 8,367 ft, maximum water surface. Figures given represent usable contents as determined from summation of individual contents of Grand Lake and Shadow Mountain Lake. Transmountain diversion from Colorado River basin, including water pumped from Lake Granby, is effected through Grand Lake and Alva B. Adams tunnel, for power and irrigation in South Platte River basin.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 17,920 acre-ft, May 22, 1955, elevation, 8,367.03 ft; minimum since appreciable storage was first attained, 2,630 acre-ft, May 14, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,620 acre-ft, Oct. 14, elevation, 8,366.90 ft; minimum, 16,400 acre-ft, June 11, elevation, 8,366.03 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	8,366.75	17,350	-
Oct. 31.	8,366.71	17,280	-70
Nov. 30.	8,366.79	17,420	+140
Dec. 31.	8,366.74	17,330	-90
CAL YR 1989			+110
Jan. 31.	8,366.80	17,430	+100
Feb. 28.	8,366.75	17,330	-100
Mar. 31.	8,366.70	17,310	-20
Apr. 30.	8,366.68	17,270	-40
May 31.	8,366.53	17,040	-230
June 30.	8,366.72	17,350	+310
July 31.	8,366.70	17,310	-40
Aug. 31.	8,366.68	17,270	-40
Sept. 30.	8,366.71	17,330	+60
WTR YR 1990			-20

COLORADO RIVER BASIN

09014500 SHADOW MOUNTAIN LAKE NEAR GRAND LAKE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)
MAY						
14...	1340	0.1	66	7.6	8.5	9.0
14...	1341	5.0	66	7.6	8.5	8.7
14...	1342	10.0	67	7.6	8.5	8.5
14...	1343	15.0	67	7.6	8.5	8.5
14...	1344	20.0	67	7.6	8.0	8.2
14...	1345	23.0	67	7.6	7.5	7.9
JUL						
17...	1407	0.1	40	7.6	19.5	7.0
17...	1408	5.0	40	7.6	19.0	6.9
17...	1409	10.0	47	7.5	16.0	6.0
17...	1410	15.0	49	7.4	15.0	5.1
17...	1411	20.0	52	7.4	14.0	4.9
17...	1412	25.0	44	7.3	12.5	2.1
17...	1413	30.0	49	7.2	11.5	0.7
SEP						
05...	1245	0.1	62	9.5	19.5	9.8
05...	1246	5.0	62	9.6	18.5	9.0
05...	1247	10.0	62	9.6	16.0	8.5
05...	1248	15.0	65	8.3	14.5	5.2
05...	1249	20.0	67	8.0	13.5	3.6
05...	1250	25.0	71	7.5	11.5	1.7
05...	1251	28.0	73	7.2	11.5	0.8

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (IN)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAY											
14...	1400	0.1	66	7.8	8.5	69.0	9.0	K<1	27	8.3	1.6
14...	1415	23.0	67	7.8	7.5	--	7.9	--	27	8.3	1.6
JUL											
17...	1420	0.1	40	7.6	19.5	81.0	7.0	K<1	15	4.4	0.9
17...	1430	30.0	49	7.2	11.5	--	0.7	--	19	5.6	1.1
SEP											
05...	1320	0.1	62	9.5	19.5	48.0	9.8	K<1	23	7.2	1.3
05...	1330	28.0	76	7.2	11.5	--	0.8	--	26	8.2	1.4

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY											
14...	2.8	18	0.2	1.1	29	3.5	1.0	0.1	5.2	32	41
14...	2.8	17	0.2	1.5	29	3.5	1.0	0.2	5.3	42	42
JUL											
17...	1.4	17	0.2	0.5	15	2.2	0.3	0.1	3.5	20	22
17...	1.4	14	0.1	0.6	19	2.2	0.3	<0.1	6.6	30	30
SEP											
05...	2.0	15	0.2	0.6	24	2.8	0.7	0.1	4.6	31	34
05...	2.2	15	0.2	0.8	27	2.7	0.8	0.1	6.7	45	40

K BASED ON NON-IDEAL COLONY COUNT.

09014500 SHADOW MOUNTAIN LAKE NEAR GRAND LAKE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
MAY											
14...	<0.01	<0.10	<0.01	<0.01	--	0.4	0.02	<0.01	<0.01	4.6	0.2
14...	<0.01	<0.10	0.02	<0.01	0.48	0.5	0.03	<0.01	<0.01	--	--
JUL											
17...	<0.01	<0.10	0.02	0.02	0.48	0.5	0.01	<0.01	<0.01	1.1	<0.1
17...	<0.01	<0.10	0.03	0.02	0.27	0.3	0.02	<0.01	<0.01	--	--
SEP											
05...	<0.01	<0.10	<0.01	<0.01	--	0.6	0.02	0.01	<0.01	23.0	<0.3
05...	<0.01	<0.10	0.10	0.10	0.60	0.7	0.03	0.05	0.01	--	--

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM, DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAY									
14...	1400	9	<0.5	<10	<1	<5	<3	<10	160
14...	1415	9	<0.5	<10	<1	<5	<3	<10	140
JUL									
17...	1420	4	<0.5	<10	<1.0	<5	<3	<10	54
17...	1430	7	<0.5	<10	<1.0	<5	<3	<10	110
SEP									
05...	1320	4	<0.5	<10	<1.0	<5	<3	<10	70
05...	1330	8	<0.5	<10	1.0	<5	<3	<10	96

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	LITHIUM DIS- SOLVED (UG/L AS LI)
MAY									
14...	<10	49	<10	<10	<1.0	47	<6	3	<4
14...	<10	50	<10	<10	2.0	47	<6	7	<4
JUL									
17...	<10	7	<10	<10	<1.0	25	<6	7	<4
17...	<10	610	<10	<10	2.0	31	<6	<3	<4
SEP									
05...	<10	4	<10	<10	<1.0	39	<6	<3	<4
05...	<10	590	<10	<10	<1.0	52	<6	9	<4

COLORADO RIVER BASIN

09018300 GRANBY PUMP CANAL NEAR GRAND LAKE, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°12'25", long 105°50'56", in SW¼NE¼ sec.24, T. 3 N., R.76 W., Grand County, Hydrologic Unit 14010001, at road crossing at south end of Shadow Mountain Lake, 4 mi southwest of Grand Lake, and 13.5 mi northeast of Granby.

PERIOD OF RECORD.--September 1970 to September 1975, March 1978 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 09...	0630	949	66	7.4	5.5	8.3	26	7.9	1.4	2.4
JAN 31...	0800	540	69	7.3	4.0	8.5	26	8.0	1.5	2.5
SEP 26...	1845	342	66	7.2	12.5	3.7	27	8.5	1.5	2.5

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT- LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
NOV 09...	0.2	0.8	28	3.0	0.4	0.1	4.4	37	0.07	128
JAN 31...	0.2	0.9	29	4.0	0.5	0.1	3.7	39	0.06	62.7
SEP 26...	0.2	0.8	30	3.1	0.8	<0.1	4.9	40	0.05	33.2

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
NOV 09...	<0.01	0.40	<0.10	0.02	0.01	0.38	0.02	0.01	<0.01
JAN 31...	<0.01	0.60	<0.10	0.01	0.01	0.59	0.03	0.01	<0.01
SEP 26...	<0.01	0.20	<0.10	0.03	<0.01	0.17	<0.01	<0.01	<0.01

09018300 GRANBY PUMP CANAL NEAR GRAND LAKE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 09...	8	<0.5	<1.0	<5	<3	<10	10	<10
JAN 31...	8	<0.5	<1.0	<5	<3	<10	8	10
SEP 26...	8	<0.5	<1.0	<5	<3	<10	47	<10

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	LITHIUM DIS- SOLVED (UG/L AS LI)
NOV 09...	3	<10	<10	<1.0	49	<6	6	<4
JAN 31...	4	<10	<10	2.0	51	<6	<3	<4
SEP 26...	81	<10	<10	<1.0	49	<6	<3	<4

09018500 LAKE GRANBY NEAR GRANBY, CO

LOCATION.--Lat 40°10'55", long 105°52'14", in NW¼NE¼ sec.35, T.3 N., R.76 W., Grand County, Hydrologic Unit 14010001, in Granby pumping plant at north shore of lake, 2.5 mi north of Granby Dam on Colorado River and 7.5 mi northeast of Granby.

DRAINAGE AREA.--312 mi².

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1955, published as Granby Reservoir near Granby.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929. Prior to Apr. 9, 1951, nonrecording gage at dam at present datum.

REMARKS.--Lake is formed by earthfill dam and dikes. Regulation began Sept. 13, 1949, and usable storage began June 14, 1950, while dam was under construction. Usable capacity, 465,600 acre-ft, between elevations 8,186.00 ft, trash rack sill at outlet, and 8,280.00 ft, top of radial spillway gates. Dead storage, 74,190 acre-ft. Figures given represent usable contents. Lake is used to store water for pumping to Shadow Mountain Lake for transmountain diversion through Alva B. Adams tunnel for, power and irrigation in South Platte River basin.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 465,900 acre-ft, July 13, 1962, elevation, 8,280.05 ft; minimum since appreciable storage was attained, 13,070 acre-ft, Apr. 16, 1978, elevation, 8,190.93 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 227,200 acre-ft, July 13-16, elevation, 8,242.61 ft; minimum, 62,490 acre-ft, Mar. 16, elevation, 8,206.36 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	8,242.58	227,000	-
Oct. 31.	8,237.48	199,800	-27,200
Nov. 30.	8,231.39	169,100	-30,700
Dec. 31.	8,224.74	137,700	-31,400
CAL YR 1989	-	-	-144,800
Jan. 31.	8,217.46	105,900	-31,800
Feb. 28.	8,210.30	77,190	-28,710
Mar. 31.	8,206.63	63,470	-13,720
Apr. 30.	8,209.83	75,390	+11,920
May 31.	8,218.72	111,200	+35,810
June 30.	8,240.71	216,900	+105,700
July 31.	8,242.55	226,800	+9,900
Aug. 31.	8,242.19	224,900	-1,900
Sept. 30.	8,241.59	221,600	-3,300
WTR YR 1990	-	-	-5,400

09018500 LAKE GRANBY NEAR GRANBY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1973 to June 1975, June 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

		DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)					
JUN													
	06...		1002	0.1	63	7.9	11.5	8.5					
	06...		1003	5.0	66	7.9	11.0	8.5					
	06...		1004	10.0	67	7.9	10.5	8.5					
	06...		1005	20.0	70	7.9	10.5	8.3					
	06...		1006	25.0	75	7.8	10.5	8.2					
	06...		1007	30.0	72	7.8	10.0	8.2					
	06...		1008	40.0	70	7.7	9.5	7.8					
	06...		1009	50.0	72	7.6	8.5	7.3					
	06...		1010	60.0	72	7.6	8.0	6.9					
	06...		1011	70.0	71	7.6	7.0	6.8					
	06...		1012	75.0	70	7.5	7.0	6.6					
	06...		1013	80.0	70	7.5	7.0	6.6					
	06...		1014	90.0	70	7.4	6.5	6.2					
JUL													
	18...		1000	0.1	66	7.9	19.5	7.4					
	18...		1001	5.0	66	8.0	19.0	7.3					
	18...		1002	10.0	66	8.1	18.5	7.2					
	18...		1003	20.0	67	8.1	18.0	6.9					
	18...		1004	25.0	67	7.9	17.5	6.1					
	18...		1005	30.0	59	7.9	14.5	5.3					
	18...		1006	40.0	62	7.8	12.5	4.8					
	18...		1007	50.0	65	7.7	11.5	4.5					
	18...		1008	60.0	68	7.6	9.5	3.8					
	18...		1009	70.0	67	7.6	9.0	3.6					
	18...		1010	75.0	68	7.6	9.0	3.5					
	18...		1011	80.0	68	7.6	8.5	3.5					
	18...		1012	90.0	69	7.6	8.5	3.3					
	18...		1013	100	70	7.5	8.5	3.2					
	18...		1014	110	70	7.5	8.5	3.2					
	18...		1015	115	70	7.5	8.5	3.2					
SEP													
	06...		1015	0.1	65	8.2	17.5	8.0					
	06...		1016	5.0	65	8.3	17.5	7.9					
	06...		1017	10.0	65	8.2	17.5	7.7					
	06...		1018	20.0	65	8.2	17.0	7.7					
	06...		1019	25.0	66	8.2	17.0	7.5					
	06...		1020	30.0	66	7.5	16.0	5.4					
	06...		1021	40.0	65	7.1	13.5	--					
	06...		1022	50.0	66	6.9	11.5	--					
	06...		1023	60.0	68	6.8	10.5	--					
	06...		1024	70.0	69	6.8	9.5	--					
	06...		1025	75.0	70	6.7	9.5	--					
	06...		1026	80.0	70	6.7	9.0	--					
	06...		1027	90.0	70	6.7	9.0	--					
	06...		1028	100	71	6.6	9.0	--					
	06...		1029	110	72	6.6	9.0	--					
	06...		1030	120	73	6.6	8.5	--					
	06...		1031	125	74	6.6	8.5	--					
	06...		1032	130	75	6.6	8.5	--					
	06...		1033	140	76	6.6	8.5	--					
	06...		1034	150	76	6.6	8.5	--					
DATE		TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (IN)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	
JUN													
	06...		1045	0.100	64	7.9	11.5	72.0	8.5	K<1	26	8.1	1.5
	06...		1100	90.0	69	7.4	6.5	--	6.2	--	29	9.1	1.6
JUL													
	18...		1030	0.10	66	7.9	19.5	80.0	7.4	K<1	26	7.7	1.6
	18...		1045	115	68	7.5	8.5	--	3.2	--	27	8.2	1.5
SEP													
	06...		1100	0.100	68	8.2	17.5	94.0	8.0	K2	27	8.5	1.4
	06...		1115	150	74	6.6	8.5	--	--	--	28	8.8	1.5

K BASED ON NON-IDEAL COLONY COUNT.

09018500 LAKE GRANBY NEAR GRANBY, CO--Continued

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN											
06...	2.7	18	0.2	0.8	28	3.9	0.6	<0.1	4.4	--	39
06...	2.8	17	0.2	0.8	31	3.3	0.3	<0.1	4.9	38	42
JUL											
18...	2.5	17	0.2	0.7	27	2.9	0.4	0.1	3.9	34	36
18...	2.6	17	0.2	0.8	29	3.0	0.4	<0.1	5.3	33	40
SEP											
06...	2.5	16	0.2	0.7	28	3.3	0.8	0.1	2.3	41	36
06...	2.6	16	0.2	0.8	29	3.3	0.9	0.1	6.0	45	42

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
JUN											
06...	<0.01	<0.10	0.02	0.01	0.38	0.40	0.01	<0.01	<0.01	2.5	<0.10
06...	<0.01	<0.10	0.04	0.04	0.26	0.30	<0.01	<0.01	<0.01	--	--
JUL											
18...	<0.01	<0.10	0.02	0.01	0.48	0.50	0.01	<0.01	0.01	1.4	<0.10
18...	<0.01	0.10	0.02	0.03	0.18	0.20	0.01	<0.01	<0.01	--	--
SEP											
06...	<0.01	<0.10	<0.01	<0.01	--	0.30	0.02	<0.01	<0.01	3.1	<0.10
06...	<0.01	0.20	<0.01	0.02	--	0.40	<0.01	0.03	<0.01	--	--

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUN									
06...	1045	8	<0.5	<10	<1	<5	<3	<10	38
06...	1100	8	<0.5	<10	<1	<5	<3	<10	21
JUL									
18...	1030	9	<0.5	<10	<1.0	<5	<3	<10	45
18...	1045	7	<0.5	<10	<1.0	<5	<3	<10	11
SEP									
06...	1100	9	<0.5	<10	<1.0	<5	<3	<10	36
06...	1115	4	<0.5	<10	<1.0	<5	<3	<10	19

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	LITHIUM DIS- SOLVED (UG/L AS LI)
JUN									
06...	<10	5	<10	<10	2.0	50	<6	<3	<4
06...	<10	100	<10	<10	<1.0	55	<6	<3	<4
JUL									
18...	<10	10	<10	10	<1.0	46	<6	<3	<4
18...	<10	76	<10	<10	<1.0	50	<6	<3	<4
SEP									
06...	<10	5	<10	<10	<1.0	48	<6	3	<4
06...	<10	60	<10	<10	<1.0	56	<6	8	<4

400844105530800 LAKE GRANBY NEAR GRANBY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)
JUN						
06...	1145	0.1	84	7.6	11.5	8.6
06...	1146	5.0	83	7.5	11.0	8.3
06...	1147	10.0	83	7.5	10.5	8.1
06...	1148	15.0	83	7.5	10.5	7.9
JUL						
18...	1154	0.1	64	8.0	19.5	--
18...	1155	5.0	65	8.1	18.5	--
18...	1156	10.0	65	8.1	18.0	--
18...	1157	15.0	65	8.0	18.0	--
18...	1158	20.0	67	8.0	18.0	--
18...	1159	25.0	69	7.9	17.5	--
18...	1200	30.0	69	7.6	14.5	--
18...	1201	35.0	69	7.5	13.5	--
SEP						
06...	1220	0.1	68	8.4	18.5	7.5
06...	1221	5.0	68	8.4	18.0	7.5
06...	1222	10.0	69	8.4	17.5	7.5
06...	1223	15.0	68	8.3	17.5	7.3
06...	1224	20.0	69	8.2	17.5	7.2
06...	1225	25.0	69	7.7	17.0	6.4
06...	1226	30.0	70	7.5	16.5	5.3
06...	1227	35.0	70	7.0	15.5	3.3

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (IN)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN											
06...	1150	0.10	85	7.6	11.5	43.0	8.6	K5	36	11	2.0
06...	1200	15.0	84	7.5	10.5	--	7.9	--	35	11	1.9
JUL											
18...	1210	0.10	66	8.0	19.5	68.0	--	K6	26	7.9	1.4
18...	1220	35.0	69	7.5	13.5	--	--	--	27	8.2	1.6
SEP											
06...	1230	0.100	68	8.4	18.5	69.0	7.5	K1	29	9.2	1.4
06...	1240	35.0	67	7.0	15.5	--	3.3	--	27	8.4	1.4

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
JUN											
06...	3.9	19	0.3	0.8	38	4.5	0.4	<0.1	8.9	51	55
06...	3.8	19	0.3	0.8	37	4.0	0.5	<0.1	8.3	55	53
JUL											
18...	2.5	17	0.2	0.8	28	3.3	0.4	<0.1	4.1	29	37
18...	2.5	16	0.2	0.8	29	3.2	0.4	<0.1	5.8	47	40
SEP											
06...	2.6	16	0.2	0.8	28	3.3	0.8	0.1	2.4	43	38
06...	2.4	16	0.2	0.7	28	3.3	0.9	0.1	3.3	41	38

K BASED ON NON-IDEAL COLONY COUNT.

400844105530800 LAKE GRANBY NEAR GRANBY, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
JUN											
06...	<0.01	<0.10	0.01	0.03	--	<0.20	0.02	<0.01	<0.01	3.8	<0.10
06...	<0.01	<0.10	<0.01	<0.01	--	0.20	0.03	<0.01	<0.01	--	--
JUL											
18...	<0.01	<0.10	0.02	<0.01	0.48	0.50	0.02	0.02	0.01	2.3	<0.10
18...	<0.01	<0.10	0.07	0.06	0.53	0.60	0.02	<0.01	<0.01	--	--
SEP											
06...	<0.01	<0.10	<0.01	0.03	--	0.60	0.02	0.01	<0.01	1.0	<0.10
06...	<0.01	0.10	0.01	0.03	0.39	0.40	0.02	0.02	0.02	--	--

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUN									
06...	1150	11	<0.5	<10	<1	<5	<3	<10	95
06...	1200	11	<0.5	<10	<1	<5	<3	<10	68
JUL									
18...	1210	9	<0.5	<10	<1.0	<5	<3	<10	73
18...	1220	10	<0.5	<10	<1.0	<5	<3	<10	36
SEP									
06...	1230	9	<0.5	<10	<1.0	<5	<3	<10	39
06...	1240	8	<0.5	<10	<1.0	<5	<3	<10	65

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	LITHIUM DIS- SOLVED (UG/L AS LI)
JUN									
06...	<10	23	<10	<10	1.0	73	<6	<3	<4
06...	<10	23	<10	<10	<1.0	71	<6	<3	<4
JUL									
18...	<10	6	<10	<10	3.0	45	<6	<3	<4
18...	<10	67	<10	<10	<1.0	49	<6	<3	<4
SEP									
06...	<10	4	<10	<10	<1.0	48	<6	6	<4
06...	<10	6	<10	<10	<1.0	51	<6	4	<4

09019500 COLORADO RIVER NEAR GRANBY, CO

LOCATION.--Lat 40°07'15", long 105°54'00", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.22, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, on right bank 0.3 mi upstream from bridge on U.S. Highway 34, 1.3 mi upstream from Willow Creek, and 3.2 mi northeast of Granby.

DRAINAGE AREA.--323 mi².

PERIOD OF RECORD.--October 1907 to September 1911 (published as Grand River near Granby), October 1933 to September 1953. May 1961 to current year (irrigation season only). Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,960 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 10, 1908, to Sept. 30, 1911, and May 12 to June 10, 1934, nonrecording gage, at site 300 ft upstream at different datums. June 11, 1934, to Sept. 30, 1953, water-stage recorder at present site and datum.

REMARKS.--No estimated daily discharges: Records good. Flow regulated by Lake Granby (station 09018500) since Sept. 13, 1949. Several diversions for irrigation of hay meadows upstream from station. Transmountain diversions upstream from station by Eureka and Grand River ditches and Alva B. Adams tunnel (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF SEASONAL RECORD.--Maximum discharge, 2,510 ft³/s, July 11, 1983, gage height, 5.39 ft; minimum daily, 9.6 ft³/s, Sept. 21, 1981.

EXTREMES FOR PERIOD OF CONTINUOUS RECORD.--Maximum discharge observed, 4,100 ft³/s, June 20, 1909, gage height, 5.5 ft, site and datum then in use; minimum daily, 6.6 ft³/s, Jan. 29, 1950; minimum observed prior to starting construction of Shadow Mountain Lake, 20 ft³/s, Apr. 6, 1936 (discharge measurement).

EXTREMES FOR CURRENT SEASON.--Maximum discharge, 108 ft³/s at 1730 May 29, gage height, 1.31 ft; minimum daily, 19 ft³/s, Sept. 20, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	53	76	78	53	21
2	---	---	---	---	---	---	---	70	75	78	39	21
3	---	---	---	---	---	---	---	70	73	78	39	21
4	---	---	---	---	---	---	---	70	75	76	39	21
5	---	---	---	---	---	---	24	70	73	75	38	21
6	---	---	---	---	---	---	24	70	74	75	38	21
7	---	---	---	---	---	---	24	70	74	76	39	20
8	---	---	---	---	---	---	25	72	72	80	39	21
9	---	---	---	---	---	---	25	72	72	75	39	21
10	---	---	---	---	---	---	24	75	73	73	38	21
11	---	---	---	---	---	---	25	77	73	77	37	21
12	---	---	---	---	---	---	26	81	76	75	38	21
13	---	---	---	---	---	---	25	76	77	78	38	20
14	---	---	---	---	---	---	26	73	75	81	38	20
15	---	---	---	---	---	---	26	88	76	81	39	21
16	---	---	---	---	---	---	25	82	76	81	39	20
17	---	---	---	---	---	---	23	72	76	81	40	21
18	---	---	---	---	---	---	22	75	76	80	39	21
19	---	---	---	---	---	---	22	75	75	82	39	20
20	---	---	---	---	---	---	22	73	73	81	40	19
21	---	---	---	---	---	---	22	75	75	81	39	19
22	---	---	---	---	---	---	22	83	76	80	40	20
23	---	---	---	---	---	---	23	75	75	80	40	20
24	---	---	---	---	---	---	24	76	73	80	40	21
25	---	---	---	---	---	---	26	79	73	81	40	21
26	---	---	---	---	---	---	26	80	75	78	40	20
27	---	---	---	---	---	---	24	78	75	79	40	21
28	---	---	---	---	---	---	25	78	73	81	40	22
29	---	---	---	---	---	---	25	89	73	80	40	21
30	---	---	---	---	---	---	24	81	76	80	40	20
31	---	---	---	---	---	---	---	81	---	78	30	---
TOTAL	---	---	---	---	---	---	---	2339	2234	2439	1217	618
MEAN	---	---	---	---	---	---	---	75.5	74.5	78.7	39.3	20.6
MAX	---	---	---	---	---	---	---	89	77	82	53	22
MIN	---	---	---	---	---	---	---	53	72	73	30	19
AC-FT	---	---	---	---	---	---	---	4640	4430	4840	2410	1230

09020700 WILLOW CREEK RESERVOIR NEAR GRANBY, CO

LOCATION.--Lat 40°08'49", long 105°56'31", in SE¼ sec.7, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, in shaft house near right end of Willow Creek Dam, 3.2 mi upstream from mouth, and 4.2 mi north of Granby.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--May 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth and rockfill dam; storage began March 1953. Dead storage pool filled May 3, 1953. Usable capacity, 9,060 acre-ft between elevations 8,077.00 ft, trash rack sill at outlet, and 8,130.00 ft, crest of spillway. Dead storage, 1,490 acre-ft. Figures given represent usable contents. Water is pumped to Lake Granby for transmountain diversion for irrigation and power in South Platte River basin.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,100 acre-ft, May 24, 1984, elevation, 8,130.12 ft; minimum 50 acre-ft, Dec. 4, 1985 to Jan. 17, 1986, drawdown for maintenance, elevation, 8,077.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,820 acre-ft, Apr. 26, elevation, 8,125.65 ft; minimum, 5,720 acre-ft, Nov. 8, elevation, 8,116.90 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	8,121.26	6,700	-
Oct. 31.	8,119.48	6,290	-410
Nov. 30.	8,117.94	5,940	-350
Dec. 31.	8,119.20	6,220	+280
CAL YR 1989			+10
Jan. 31.	8,120.20	6,450	+230
Feb. 28.	8,121.13	6,670	+220
Mar. 31.	8,124.09	7,410	+740
Apr. 30.	8,121.40	6,740	-670
May 31.	8,119.78	6,350	-390
June 30.	8,119.02	6,180	-170
July 31.	8,121.68	6,800	+620
Aug. 31.	8,123.86	7,350	+550
Sept. 30.	8,123.48	7,250	-100
WTR YR 1990			+550

09022000 FRASER RIVER AT UPPER STATION, NEAR WINTER PARK, CO

LOCATION.--Lat 39°50'45", long 105°45'05", in Sec.26, T.2 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 0.8 mi upstream from Parsenn Creek and 2.5 mi south of Winter Park.

DRAINAGE AREA.--10.5 mi².

PERIOD OF RECORD.--May to September 1908, July to November 1909 (published as "at upper station near Fraser"), October 1968 to September 1973, Aug. 21, 1984 to current year. January to September 1911, gage heights only (published as "near Fraser"). Records for August to December 1910, published in WSP 289 as "near Fraser" are unreliable and should not be used.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 9,520 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1968, nonrecording gage at site 0.9 mi upstream at different datum. Since Oct. 1, 1968, supplementary water-stage recorder and Parshall flume on Berthoud Pass ditch.

REMARKS.--Estimated daily discharges: Oct. 19, 20, 27, 28, Nov. 2, 11-17, 22, 23, Dec. 5 to Jan. 14, and Mar. 26. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station through Berthoud Pass ditch to Moffat water tunnel, (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained, and are published elsewhere in this report.

AVERAGE DISCHARGE.--11 years, 14.0 ft³/s; 10,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft³/s, June 5, 1972, gage height, 2.15 ft; minimum daily, 1.2 ft³/s, Feb. 26, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 155 ft³/s at 0500 June 10, gage height 2.05 ft; minimum daily, 1.3 ft³/s, Feb. 15 and Mar. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	3.3	2.9	2.5	2.1	1.5	2.0	4.3	45	40	9.8	11
2	5.2	3.4	2.9	2.5	2.0	1.5	2.3	4.1	40	38	9.3	11
3	5.1	3.5	2.9	2.5	1.9	1.5	2.6	4.1	41	35	9.3	11
4	5.1	3.6	2.9	2.5	1.8	1.6	2.6	4.2	52	29	8.8	9.1
5	5.1	3.3	2.9	2.5	1.8	1.6	2.5	4.2	68	27	8.8	8.8
6	5.4	3.3	2.9	2.5	1.7	1.5	2.3	5.4	101	28	8.3	9.3
7	5.1	3.8	2.9	2.5	1.7	1.3	2.6	7.2	106	27	8.1	9.3
8	5.1	3.6	2.8	2.5	1.6	1.5	2.7	7.7	113	28	8.3	9.3
9	5.0	3.4	2.7	2.5	1.6	1.6	2.6	7.0	105	27	8.2	9.0
10	4.7	3.3	2.7	2.5	1.6	1.6	2.5	7.6	118	24	7.9	8.8
11	4.7	3.3	2.6	2.5	1.7	1.6	2.5	7.9	108	23	7.6	8.3
12	4.5	3.3	2.6	2.5	1.8	1.6	2.6	7.0	101	21	8.3	8.2
13	4.5	3.3	2.6	2.5	1.7	1.8	2.3	7.6	93	19	7.9	8.1
14	4.5	3.3	2.5	2.5	1.7	1.7	2.8	9.0	81	18	7.2	7.9
15	4.7	3.3	2.5	2.5	1.3	1.6	3.3	10	79	17	7.9	7.4
16	4.5	3.4	2.5	2.5	1.6	1.6	3.8	9.1	77	17	7.6	7.2
17	4.4	3.4	2.5	2.2	1.6	1.5	4.2	9.0	72	16	14	8.5
18	4.4	3.5	2.5	2.2	1.6	1.5	4.5	10	71	15	10	8.3
19	4.4	3.5	2.5	2.3	1.6	1.5	4.7	11	70	14	9.1	7.9
20	4.4	3.5	2.5	2.3	1.6	1.7	4.7	12	69	15	8.1	7.2
21	4.4	3.5	2.5	2.3	1.7	1.8	5.4	15	64	15	8.0	7.0
22	4.2	3.5	2.5	2.3	1.6	2.1	6.6	20	63	14	8.3	6.6
23	4.1	3.5	2.5	2.3	1.5	2.0	7.8	28	63	12	8.6	6.4
24	4.2	3.5	2.5	2.3	1.5	2.0	7.4	38	62	12	8.3	6.4
25	3.9	3.4	2.5	2.3	1.6	2.0	6.0	39	58	12	8.3	8.4
26	3.9	3.3	2.5	2.3	1.6	2.3	5.4	41	56	11	7.9	9.3
27	3.8	3.1	2.5	2.2	1.6	2.1	4.7	43	52	11	7.6	7.2
28	3.7	2.8	2.5	2.1	1.5	2.0	4.5	53	48	11	7.3	8.3
29	3.6	2.8	2.5	2.1	---	2.0	3.9	56	45	10	7.0	8.1
30	3.5	3.0	2.5	2.0	---	1.7	4.1	52	40	10	6.8	7.2
31	3.4	---	2.5	2.2	---	1.7	---	51	---	9.3	9.4	---
TOTAL	138.7	100.7	81.3	73.4	46.6	53.0	115.9	584.4	2161	605.3	262.0	250.5
MEAN	4.47	3.36	2.62	2.37	1.66	1.71	3.86	18.9	72.0	19.5	8.45	8.35
MAX	5.4	3.8	2.9	2.5	2.1	2.3	7.8	56	118	40	14	11
MIN	3.4	2.8	2.5	2.0	1.3	1.3	2.0	4.1	40	9.3	6.8	6.4
AC-FT	275	200	161	146	92	105	230	1160	4290	1200	520	497

CAL YR 1989 TOTAL 3838.6 MEAN 10.5 MAX 57 MIN 1.2 AC-FT 7610
WTR YR 1990 TOTAL 4472.8 MEAN 12.3 MAX 118 MIN 1.3 AC-FT 8870

09024000 FRASER RIVER NEAR WINTER PARK, CO

LOCATION.--Lat 39°54'00", long 105°46'34", in SE¼ sec.4, T.2 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 500 ft downstream from bridge on U.S. Highway 40, 1.1 mi northwest of Winter Park, 2.0 mi upstream from Vasquez Creek, 3.5 mi downstream from point of diversion for Moffat water tunnel, and 3.9 mi southeast of Fraser.

DRAINAGE AREA.--27.6 mi².

PERIOD OF RECORD.--September 1910 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Arrow" 1910-23 and as "near West Portal" 1924-39. Records since June 9, 1936, equivalent to earlier records if transmountain diversions are added to flow past station.

REVISED RECORDS.--WSP 929: Drainage area. WDR CO-89-2: 1988 (M).

GAGE.--Water-stage recorder. Datum of gage is 8,906.23 ft, Colorado State Highway Datum (levels by U.S. Geological Survey). Sept. 23, 1910, to May 12, 1916, nonrecording gage at trail bridge 0.6 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 19, 20, Oct. 29 to Nov. 3, Nov. 7, 8, 12, 14-20, 23, Nov. 26 to Dec. 4, Jan 18, 21, Feb. 9, 12, 14-19, Feb. 24 to Apr. 6. Records fair except for estimated daily discharges, which are poor. Transmountain diversions upstream from station through Berthoud Pass ditch (see elsewhere in this report) and to Moffat water tunnel (not known since 1968). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft³/s, June 13, 1918, gage height, 2.9 ft; minimum daily determined, 2.0 ft³/s, Mar. 30, Apr. 9, 1912, Jan 23, 1915.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66 ft³/s at 2100 June 8, gage height, 1.17 ft; maximum gage height, 1.63 ft, at 1600 Nov. 18 (backwater from ice); minimum daily discharge, 2.7 ft³/s, Mar. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	3.9	4.6	4.8	3.2	3.2	4.5	7.5	19	12	11	12
2	7.1	3.9	4.6	5.2	3.1	3.2	5.0	8.0	18	13	11	14
3	6.1	3.9	4.7	4.8	3.3	3.2	5.5	8.2	18	12	11	13
4	5.8	3.9	4.7	4.6	3.4	3.4	5.4	8.2	19	11	11	12
5	5.5	3.9	4.8	4.8	3.2	3.3	5.2	9.0	19	11	10	14
6	4.8	4.3	4.7	4.8	3.5	3.1	5.0	11	18	13	11	19
7	4.8	4.3	4.7	4.6	3.0	2.7	5.8	12	18	13	11	11
8	4.8	4.1	4.9	4.5	3.0	2.9	6.0	11	27	14	11	12
9	4.8	4.0	4.6	4.5	3.0	3.3	6.0	9.5	32	39	11	12
10	6.4	4.1	4.7	4.4	3.1	3.4	5.7	9.1	19	43	11	12
11	5.3	4.2	4.4	4.4	3.0	3.4	5.7	8.9	19	30	11	11
12	5.1	4.1	5.1	4.4	3.0	3.4	5.8	8.6	19	15	12	11
13	5.3	4.0	5.1	4.4	3.1	3.8	5.6	10	18	12	11	13
14	5.1	4.0	4.9	4.2	3.1	3.5	6.1	11	17	11	11	18
15	5.3	4.0	4.9	3.8	3.1	3.4	7.5	12	18	11	12	18
16	5.4	4.2	4.9	3.8	3.2	3.4	8.7	11	18	11	12	18
17	5.3	4.3	4.9	3.9	3.2	3.2	9.3	10	16	11	12	23
18	5.3	4.3	4.8	3.8	3.2	3.2	9.2	11	14	11	12	21
19	5.2	4.3	5.0	3.8	3.2	3.2	8.7	11	13	11	12	20
20	4.9	4.3	4.9	3.6	3.3	3.6	8.8	11	13	12	11	18
21	4.4	4.3	4.8	3.6	3.4	4.0	9.5	12	12	11	11	18
22	4.4	4.1	4.9	3.7	3.3	4.4	11	13	12	10	12	18
23	4.3	4.2	4.9	3.6	3.3	4.2	11	16	12	11	11	18
24	4.2	4.4	4.9	3.5	3.3	4.2	11	17	11	10	11	17
25	4.2	4.3	4.9	3.5	3.4	4.2	9.1	16	11	12	11	15
26	4.4	4.4	5.0	3.6	3.4	4.2	8.2	16	11	11	11	8.5
27	4.6	4.4	4.9	3.5	3.4	4.2	7.1	16	11	11	11	5.9
28	4.1	4.5	4.8	3.6	3.2	4.2	8.6	18	11	11	11	6.4
29	4.0	4.5	4.8	3.8	---	4.2	9.7	21	11	11	11	6.1
30	4.0	4.6	4.8	3.8	---	3.6	7.8	19	11	11	11	4.8
31	4.0	---	4.8	3.2	---	3.7	---	20	---	11	11	---
TOTAL	155.1	125.7	149.4	126.5	89.9	110.9	222.5	382.0	485	436	347	419.7
MEAN	5.00	4.19	4.82	4.08	3.21	3.58	7.42	12.3	16.2	14.1	11.2	14.0
MAX	7.1	4.6	5.1	5.2	3.5	4.4	11	21	32	43	12	23
MIN	4.0	3.9	4.4	3.2	3.0	2.7	4.5	7.5	11	10	10	4.8
AC-FT	308	249	296	251	178	220	441	758	962	865	688	832

CAL YR 1989 TOTAL 2911.1 MEAN 7.98 MAX 21 MIN 3.4 AC-FT 5770
WTR YR 1990 TOTAL 3049.7 MEAN 8.36 MAX 43 MIN 2.7 AC-FT 6050

09025000 VASQUEZ CREEK AT WINTER PARK, CO
(Formerly published as Vasquez Creek near Winter Park, CO)

LOCATION.--Lat 39°55'13", long 105°47'05", in NE¼NW¼ sec.33, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 30 ft downstream from bridge on U.S. Highway 40, 0.2 mi upstream from mouth, 2.5 mi northwest of Winter Park, 2.5 mi southeast of Fraser, and 4.5 mi downstream from Moffat water tunnel diversion.

DRAINAGE AREA.--27.8 mi².

PERIOD OF RECORD.--June to August 1907, July to November 1909, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313. Records for June to October 1908, published in WSP 269, are unreliable and should not be used. Published as Vasquez River at lower station, near Fraser 1907-9, as "near West Portal" 1934-39, and as "near Winter Park" 1940-87. Records for May 26, 1937, to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8,768.48 ft above National Geodetic Vertical Datum of 1929. June 1, 1907, to Oct. 31, 1909, nonrecording gage at site 0.8 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 28 to Nov. 10, Nov. 14 to Dec. 6, Mar. 4-27, Apr. 14-21, 24, and May 5-9. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel not known since 1959. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 526 ft³/s, June 27, 1983, gage height, 4.14 ft, from rating curve extended above 286 ft³/s; no flow at times in 1944, 1946, 1956, 1960, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56 ft³/s at 1300 July 9, gage height, 2.17 ft; minimum daily, 3.1 ft³/s, Mar. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	5.0	5.2	4.6	3.8	4.4	4.8	9.8	16	9.6	9.9	12
2	4.9	4.9	5.2	4.6	3.8	4.3	4.8	9.4	16	9.0	10	14
3	4.9	4.7	5.2	4.7	3.8	4.1	5.4	9.7	15	8.6	9.5	15
4	4.8	4.6	5.2	4.7	3.8	3.9	5.3	9.5	14	11	8.7	13
5	4.7	4.5	5.2	4.7	3.8	3.9	5.0	10	11	11	11	12
6	4.5	4.5	5.0	4.7	3.8	3.8	5.4	11	12	10	12	12
7	4.6	4.5	5.0	4.7	3.8	3.7	5.9	12	18	10	12	12
8	4.5	4.5	4.7	4.7	3.8	3.7	6.3	12	21	12	13	12
9	4.5	4.5	4.4	4.7	3.8	3.7	6.8	11	14	41	13	12
10	7.1	4.6	4.4	4.7	3.8	3.6	6.4	9.7	11	55	12	12
11	10	5.2	4.5	4.6	3.8	3.6	6.4	10	12	40	12	11
12	8.6	5.4	4.5	4.4	3.8	3.5	6.6	9.8	11	14	13	11
13	4.1	4.9	4.6	4.2	3.8	3.5	7.2	11	13	8.9	12	12
14	4.6	5.0	4.6	4.0	3.7	3.4	7.6	11	12	8.5	12	12
15	4.7	5.0	4.7	3.4	3.8	3.4	8.0	14	11	9.4	12	10
16	4.6	5.0	4.5	3.6	3.8	3.3	8.5	16	10	11	13	6.7
17	4.6	5.0	4.2	3.6	3.8	3.3	9.0	15	12	11	13	8.0
18	4.5	5.0	4.0	3.6	3.8	3.3	9.4	17	12	10	13	7.0
19	4.7	5.0	4.2	3.6	3.8	3.2	9.9	18	10	9.4	13	6.7
20	4.6	5.0	4.3	3.6	3.8	3.2	10	17	11	8.9	12	6.5
21	5.7	5.0	4.1	3.9	3.8	3.1	11	16	13	11	12	6.4
22	5.5	4.8	5.2	4.1	4.0	3.2	12	17	11	10	12	6.2
23	5.4	5.2	4.2	4.1	4.1	3.3	15	19	9.6	11	12	6.2
24	5.0	5.6	4.2	4.1	4.2	3.6	13	18	7.8	10	11	6.2
25	5.0	5.0	4.1	4.1	4.4	3.5	11	17	8.6	11	11	6.4
26	5.4	5.0	4.8	4.1	4.3	3.7	9.7	17	8.1	10	11	7.4
27	5.2	5.0	5.2	4.0	4.4	3.4	9.7	16	8.6	10	11	6.5
28	5.2	5.2	5.3	3.8	4.4	4.3	9.3	16	11	9.9	11	6.6
29	5.2	5.4	5.7	3.8	---	4.4	11	20	7.7	10	11	6.9
30	5.2	5.2	5.1	3.8	---	4.7	10	18	9.3	10	9.8	6.5
31	5.2	---	4.7	3.8	---	4.8	---	18	---	10	12	---
TOTAL	162.4	148.2	146.2	129.0	109.5	114.8	250.4	434.9	356.7	421.2	359.9	282.2
MEAN	5.24	4.94	4.72	4.16	3.91	3.70	8.35	14.0	11.9	13.6	11.6	9.41
MAX	10	5.6	5.7	4.7	4.4	4.8	15	20	21	55	13	15
MIN	4.1	4.5	4.0	3.4	3.7	3.1	4.8	9.4	7.7	8.5	8.7	6.2
AC-FT	322	294	290	256	217	228	497	863	708	835	714	560

CAL YR 1989 TOTAL 2590.0 MEAN 7.10 MAX 17 MIN 3.3 AC-FT 5140
WTR YR 1990 TOTAL 2915.4 MEAN 7.99 MAX 55 MIN 3.1 AC-FT 5780

09025400 ELK CREEK NEAR FRASER, CO

LOCATION.--Lat 39°55'09", long 105°49'31", in SE¼NW¼ sec.31, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 100 ft upstream from unnamed tributary 1,150 ft downstream from West Elk Creek, 2.0 mi southwest of Fraser, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--7.15 mi².

PERIOD OF RECORD.--September 1970 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,805 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 19, 20, and Oct. 27 to Mar. 20. Records fair except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel. Diversions for irrigation of about 100 acres of hay meadows upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 106 ft³/s, May 24, 1984, gage height, 3.13 ft, maximum gage height, 3.97 ft, Mar. 12, Apr. 10-16, 1987 (backwater from ice); minimum daily discharge, 0.10 ft³/s, Jan. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8.9 ft³/s at 1000 Apr. 30, gage height, 1.74 ft; minimum daily, 0.25 ft³/s, Feb. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.84	.28	.38	.33	.43	.31	.66	2.4	3.5	1.9	.67	1.0
2	.81	.28	.38	.34	.41	.31	.72	2.4	3.3	1.8	.71	1.3
3	.83	.29	.38	.35	.40	.31	.87	2.2	2.8	2.2	.97	1.8
4	.89	.29	.38	.35	.37	.38	1.0	2.3	2.1	2.3	.96	1.9
5	.88	.30	.38	.36	.35	.40	.96	2.5	1.5	2.0	.54	1.0
6	.85	.30	.37	.36	.33	.38	1.0	3.3	1.4	2.0	.49	.79
7	.87	.30	.37	.36	.32	.35	1.1	3.8	1.3	2.8	.44	.43
8	.88	.30	.37	.36	.31	.40	1.0	3.8	1.6	4.2	.35	.49
9	.87	.30	.36	.34	.31	.45	1.1	3.2	2.4	3.1	.35	.68
10	.83	.30	.36	.33	.31	.49	.96	3.1	3.6	2.8	.35	.69
11	.81	.31	.30	.38	.33	.50	1.0	3.2	3.4	2.0	.36	.66
12	.79	.33	.31	.38	.36	.51	1.1	3.1	4.1	1.4	.45	.62
13	.78	.32	.33	.38	.33	.52	1.1	3.7	3.5	1.2	.49	.58
14	.53	.30	.35	.38	.33	.53	1.2	3.6	3.3	1.4	.42	.56
15	.42	.29	.39	.38	.25	.55	1.9	4.4	3.0	1.5	.94	.60
16	.43	.28	.36	.38	.31	.57	2.4	4.5	2.9	1.2	1.9	.51
17	.44	.33	.35	.38	.31	.57	2.5	3.9	3.5	.99	1.2	.91
18	.42	.35	.35	.41	.31	.56	2.9	4.2	3.3	.78	.66	.79
19	.42	.35	.35	.38	.31	.54	3.0	4.0	3.5	.74	1.2	.69
20	.41	.35	.35	.38	.31	.54	3.2	3.9	2.6	1.2	1.4	.64
21	.40	.36	.35	.43	.35	.51	3.7	3.8	1.1	1.8	1.3	.66
22	.40	.38	.35	.43	.33	.50	3.5	3.0	2.3	1.5	1.2	.67
23	.44	.39	.35	.43	.29	.50	3.9	3.4	4.1	1.1	.90	.66
24	.45	.40	.35	.42	.29	.48	3.6	3.8	4.3	.61	.72	.78
25	.43	.40	.35	.41	.33	.50	2.8	3.3	3.4	.96	.40	.77
26	.40	.40	.35	.40	.33	.54	2.4	2.7	1.9	1.0	.36	.92
27	.35	.38	.35	.39	.33	.59	3.0	2.7	1.7	1.3	.42	.78
28	.33	.32	.35	.39	.31	.61	2.4	2.6	1.6	.82	.51	.78
29	.31	.34	.34	.38	---	.62	3.3	4.6	2.1	1.3	.53	.99
30	.29	.39	.33	.38	---	.64	3.6	3.9	1.9	1.5	.47	.88
31	.27	---	.33	.45	---	.63	---	3.9	---	1.3	.93	---
TOTAL	18.07	9.91	10.97	11.82	9.25	15.29	61.87	105.2	81.0	50.70	22.59	24.53
MEAN	.58	.33	.35	.38	.33	.49	2.06	3.39	2.70	1.64	.73	.82
MAX	.89	.40	.39	.45	.43	.64	3.9	4.6	4.3	4.2	1.9	1.9
MIN	.27	.28	.30	.33	.25	.31	.66	2.2	1.1	.61	.35	.43
AC-FT	36	20	22	23	18	30	123	209	161	101	45	49

CAL YR 1989 TOTAL 461.99 MEAN 1.27 MAX 7.6 MIN .27 AC-FT 916
WTR YR 1990 TOTAL 421.20 MEAN 1.15 MAX 4.6 MIN .25 AC-FT 835

LOCATION.--Lat 39°54'36", long 105°52'40", in SE $\frac{1}{2}$ SW $\frac{1}{4}$ sec.34, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 300 ft downstream from West St. Louis Creek and 4.1 mi southwest of Fraser.

PERIOD OF RECORD.--October 1933 to current year. Prior to August 1934, monthly discharge only, published in WSP 1313. Records for May 1956 to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station.

GAGE.--Water-stage recorder. Datum of gage is 8,980.17 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 31, Nov. 2, 6-8, 12, 15-18, 22, 23, Jan. 26 to Feb. 22, Mar. 2, 5, 9-27, 29, and Apr. 2. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel not known since 1959. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 470 ft³/s, June 15, 1952, gage height, 2.89 ft; maximum gage height, 3.21 ft, June 10, 1952 (backwater from log on control); minimum discharge not determined, probably occurred during January or February 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 91 ft³/s at 0500 July 10, gage height, 1.78 ft, maximum gage height, 2.44 ft, Mar. 26 (backwater from ice); minimum daily discharge, 5.0 ft³/s, Jan. 21, Apr. 1.

[illegible]

09032000 RANCH CREEK NEAR FRASER, CO

LOCATION.--Lat 39°57'00", long 105°45'54", in NW¼NE¼ sec.22, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 450 ft downstream from Middle Fork and 2.7 mi east of Fraser.

DRAINAGE AREA.--19.9 mi².

PERIOD OF RECORD.--August 1934 to current year. Records since May 15, 1949, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station.

REVISED RECORDS.--WSP 1243: 1935.

GAGE.--Water-stage recorder. Elevation of gage is 8,685 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 19, 20, Oct. 29 to Nov. 4, Nov. 15-17, Mar. 6-8, Apr. 27, Apr. 29 to May 1. Records good. Diversion upstream from station for irrigation of hay meadows along Fraser River. Transmountain diversion upstream from station to Moffat water tunnel. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 451 ft³/s, June 27, 1983, gage height, 3.96 ft; minimum daily, 0.40 ft³/s, Sept. 21, Oct. 6, 1960; Sept. 24-26, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43 ft³/s at 2200 June 8, gage height, 1.71 ft, minimum daily, 2.0 ft³/s, Sept. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	6.0	4.8	4.0	3.3	3.1	2.5	5.2	15	3.1	4.9	3.5
2	4.4	6.0	4.8	3.9	3.3	3.1	2.7	5.2	13	2.5	4.8	5.0
3	5.0	6.0	4.8	3.9	3.5	2.9	2.4	5.5	13	2.4	4.7	7.1
4	6.0	6.0	4.8	3.9	3.4	3.0	2.5	5.3	18	2.7	4.5	4.6
5	6.0	5.7	4.8	3.9	3.3	3.1	2.6	5.8	21	3.5	4.3	3.9
6	5.8	5.6	4.7	3.9	3.3	3.2	3.3	7.3	13	3.5	4.2	3.5
7	5.9	5.6	4.6	3.9	3.3	3.3	3.0	9.0	15	5.0	4.1	3.3
8	5.6	5.6	4.4	4.0	3.3	3.4	2.9	9.3	18	6.3	3.9	3.3
9	5.7	5.4	4.4	4.1	3.3	3.5	3.0	7.5	25	12	4.1	3.1
10	5.6	5.5	4.4	3.9	3.2	3.5	2.8	7.2	22	19	3.8	3.1
11	5.6	5.5	4.4	3.8	3.1	3.5	3.1	7.3	13	17	3.7	2.9
12	5.4	5.4	4.4	3.7	3.1	3.5	3.3	6.6	8.0	15	4.0	2.7
13	5.4	5.4	4.4	3.5	3.1	3.4	3.0	7.0	8.4	4.0	4.0	2.7
14	5.4	5.2	4.4	3.5	3.1	3.5	3.3	7.7	9.1	2.5	3.6	2.6
15	5.6	5.2	4.4	3.5	3.1	3.5	4.3	8.6	6.6	2.3	3.6	2.3
16	6.1	5.2	4.4	3.5	3.3	3.4	5.2	7.9	4.9	2.6	3.8	2.0
17	6.1	5.1	4.4	3.5	3.3	3.3	5.3	7.7	5.1	2.9	4.6	3.9
18	5.8	5.1	4.4	3.5	3.3	3.3	5.5	8.4	4.6	2.4	4.7	4.1
19	5.9	5.1	4.4	3.5	3.3	3.2	5.4	8.4	4.4	2.7	4.0	3.4
20	6.0	5.0	4.4	3.5	3.3	3.3	5.4	8.9	4.1	3.8	3.7	2.9
21	6.2	5.0	4.2	3.6	3.3	3.3	5.9	9.6	3.7	6.2	3.5	2.7
22	6.1	4.9	4.1	3.7	3.2	3.5	6.2	11	4.5	8.0	3.4	2.6
23	5.9	4.7	4.1	3.7	3.1	3.7	7.0	12	5.9	6.1	3.5	2.6
24	5.9	4.8	4.0	3.7	3.1	3.5	6.9	15	5.3	5.8	3.2	2.4
25	5.8	4.9	4.1	3.5	3.1	3.5	5.8	16	4.1	6.1	3.0	2.6
26	5.9	4.9	4.0	3.5	3.1	3.5	5.5	15	2.5	5.7	2.9	2.7
27	6.2	5.0	4.1	3.5	3.1	3.2	5.3	14	2.7	5.3	2.7	2.6
28	5.9	4.8	4.1	3.3	3.1	2.7	5.0	17	3.5	5.3	2.6	2.7
29	6.0	4.7	4.1	3.3	---	2.5	5.1	21	3.0	5.4	2.5	3.2
30	6.0	4.8	4.1	3.3	---	2.4	5.2	19	3.2	5.7	2.5	2.9
31	6.0	---	4.1	3.3	---	2.4	---	18	---	5.0	2.9	---
TOTAL	177.8	158.1	135.5	113.3	90.3	100.2	129.4	313.4	279.6	179.8	115.7	96.9
MEAN	5.74	5.27	4.37	3.65	3.22	3.23	4.31	10.1	9.32	5.80	3.73	3.23
MAX	6.2	6.0	4.8	4.1	3.5	3.7	7.0	21	25	19	4.9	7.1
MIN	4.4	4.7	4.0	3.3	3.1	2.4	2.4	5.2	2.5	2.3	2.5	2.0
AC-FT	353	314	269	225	179	199	257	622	555	357	229	192

CAL YR 1989 TOTAL 1646.05 MEAN 4.51 MAX 14 MIN .80 AC-FT 3260
WTR YR 1990 TOTAL 1890.0 MEAN 5.18 MAX 25 MIN 2.0 AC-FT 3750

09032100 CABIN CREEK NEAR FRASER, CO

LOCATION.--Lat 39°59'09", long 105°44'40", in NW¼SE¼ sec.2, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 200 ft downstream from concrete diversion dam, 2.7 mi upstream from mouth and 4.6 mi northeast of Fraser.

DRAINAGE AREA.--4.87 mi².

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 18-20, Oct. 27 to May 9. Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station to Moffat water tunnel. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--7 years, 5.93 ft³/s; 4,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 126 ft³/s, June 13, 1984, gage height, 2.37 ft; minimum daily, 0.04 ft³/s, May 7, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59 ft³/s at 2100 June 10, gage height, 1.87 ft; minimum daily, 0.80 ft³/s, Mar. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.7	1.4	1.1	.94	.90	.83	1.8	3.1	16	5.0	3.4
2	1.6	1.7	1.3	1.1	.94	.90	.88	1.9	2.4	12	5.1	4.1
3	1.6	1.7	1.3	1.1	1.0	.86	.82	1.9	3.5	11	4.8	4.5
4	1.7	1.7	1.3	1.1	.96	.90	.85	1.9	9.8	11	4.6	3.3
5	1.6	1.8	1.3	1.1	.94	.93	.87	2.0	22	9.4	4.4	3.7
6	1.6	1.8	1.3	1.1	.94	.95	1.1	2.2	29	10	4.2	4.1
7	1.6	1.7	1.3	1.1	.94	.98	1.0	2.4	25	12	4.1	3.7
8	1.6	1.7	1.3	1.1	.94	1.0	1.0	2.5	29	14	4.2	3.7
9	1.6	1.7	1.2	1.1	.92	1.0	1.0	2.3	32	11	4.2	3.8
10	1.6	1.7	1.2	1.1	.89	1.1	.96	2.2	40	9.2	3.8	3.7
11	1.5	1.6	1.2	1.0	.86	1.1	1.0	2.2	48	10	3.7	3.5
12	1.5	1.6	1.2	1.0	.86	1.1	1.1	2.2	41	10	4.0	3.3
13	1.5	1.6	1.2	1.0	.86	1.1	1.0	1.8	30	9.8	3.5	3.3
14	1.5	1.6	1.2	1.0	.86	1.1	1.1	1.8	31	9.6	3.4	3.2
15	1.7	1.6	1.1	1.0	.86	1.1	1.3	1.7	27	8.9	3.5	3.1
16	1.9	1.6	1.1	1.0	.90	1.1	1.5	1.6	20	8.6	3.5	3.1
17	1.8	1.6	1.1	1.0	.90	1.1	1.6	1.2	15	8.0	4.3	5.7
18	1.8	1.5	1.1	1.0	.90	1.0	1.7	1.1	19	7.3	4.0	5.3
19	1.8	1.5	1.1	1.0	.90	1.0	1.7	1.0	19	7.0	3.5	4.3
20	1.8	1.5	1.1	1.0	.90	1.0	1.7	1.0	16	7.2	3.3	3.7
21	1.8	1.5	1.1	1.0	.90	1.1	1.8	1.4	14	7.8	3.3	3.5
22	1.8	1.5	1.1	1.1	.90	1.1	2.0	1.7	13	7.3	3.8	3.6
23	1.7	1.4	1.1	1.1	.90	1.1	2.2	1.7	13	6.5	3.8	3.6
24	1.7	1.4	1.1	1.1	.90	1.1	2.1	1.9	14	6.2	3.4	3.7
25	1.6	1.5	1.1	1.0	.90	1.1	1.9	1.9	20	7.8	3.2	3.7
26	1.7	1.5	1.1	1.0	.90	1.1	1.8	2.1	12	6.2	3.1	3.7
27	1.7	1.4	1.1	1.0	.90	1.0	1.8	3.5	11	5.6	3.0	3.5
28	1.7	1.4	1.1	.98	.90	.98	1.8	11	8.8	5.4	2.9	3.7
29	1.7	1.4	1.1	.96	---	.86	1.8	11	9.5	5.7	2.9	3.9
30	1.7	1.4	1.1	.95	---	.80	1.8	5.3	16	5.7	2.9	3.5
31	1.7	---	1.1	.94	---	.81	---	4.7	---	5.3	3.4	---
TOTAL	51.7	47.3	36.4	32.13	25.41	31.27	42.01	82.9	593.1	271.5	116.8	112.9
MEAN	1.67	1.58	1.17	1.04	.91	1.01	1.40	2.67	19.8	8.76	3.77	3.76
MAX	1.9	1.8	1.4	1.1	1.0	1.1	2.2	11	48	16	5.1	5.7
MIN	1.5	1.4	1.1	.94	.86	.80	.82	1.0	2.4	5.3	2.9	3.1
AC-FT	103	94	72	64	50	62	83	164	1180	539	232	224

CAL YR 1989 TOTAL 1366.36 MEAN 3.74 MAX 28 MIN .80 AC-FT 2710
WTR YR 1990 TOTAL 1443.42 MEAN 3.95 MAX 48 MIN .80 AC-FT 2860

09034250 COLORADO RIVER AT WINDY GAP NEAR GRANBY, CO

LOCATION.--Lat 40°06'30", long 106°00'13" in NW¼ sec.27, R.77 W., T.2 N., Grand County, Hydrologic Unit 14010001, on right bank 300 ft downstream from county highway bridge, 1.1 mi downstream from Windy Gap diversion dam, 2.4 mi downstream from mouth of Fraser River and 3.8 mi northwest of Granby.

DRAINAGE AREA.--789 mi².

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,790 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 28 to Mar. 11, and Mar. 14-17. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, and diversions for irrigation. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 288 ft³/s; 208,700 acre-ft/year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,260 ft³/s, May 25, 1984, gage height, 7.34 ft; minimum daily, 42 ft³/s, Oct. 11, 2, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 480 ft³/s at 1400 July 10, gage height, 3.56 ft, maximum recorded gage height, 4.01 ft, Jan. 29, 30 (backwater from ice); minimum daily discharge, 49 ft³/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	73	64	66	52	74	115	180	215	104	182	95
2	55	66	62	66	52	71	160	211	199	246	149	102
3	52	57	63	66	57	68	188	207	186	270	143	109
4	49	78	63	66	57	68	199	199	176	301	137	111
5	55	88	63	65	62	71	196	201	187	277	132	101
6	56	91	66	65	65	79	191	208	227	264	124	95
7	60	83	72	64	65	79	191	229	240	273	125	94
8	61	77	74	60	65	75	190	249	226	441	123	87
9	69	83	73	53	63	73	190	252	261	428	122	86
10	68	90	73	53	62	73	182	239	243	456	125	86
11	68	89	71	57	62	73	138	233	247	457	122	83
12	68	84	64	64	65	71	164	233	277	360	132	77
13	68	84	60	67	68	74	198	250	237	306	140	74
14	68	82	66	67	68	73	196	230	199	298	129	79
15	70	67	71	69	68	70	193	264	188	296	124	81
16	82	66	71	72	69	70	203	315	178	289	129	84
17	85	72	71	72	69	70	190	167	153	292	128	94
18	81	79	80	71	69	66	194	142	138	249	137	122
19	79	79	83	65	70	66	209	167	128	245	129	106
20	73	78	75	62	70	65	202	195	120	247	130	94
21	79	78	70	62	68	67	192	178	140	321	129	87
22	83	80	70	62	68	75	177	127	149	326	118	85
23	83	75	70	61	66	99	173	90	191	285	114	83
24	81	75	70	61	66	103	208	89	201	267	114	81
25	76	82	70	61	66	106	225	93	190	299	111	82
26	77	80	70	61	66	117	228	122	192	247	105	83
27	77	81	70	61	66	118	198	137	191	214	103	80
28	76	78	68	61	69	131	174	141	144	198	101	75
29	75	77	66	61	---	112	183	218	84	194	98	79
30	72	71	66	62	---	104	179	302	86	196	97	82
31	71	---	66	58	---	110	---	289	---	192	97	---
TOTAL	2174	2343	2141	1961	1813	2571	5626	6157	5593	8838	3849	2677
MEAN	70.1	78.1	69.1	63.3	64.7	82.9	188	199	186	285	124	89.2
MAX	85	91	83	72	70	131	228	315	277	457	182	122
MIN	49	57	60	53	52	65	115	89	84	104	97	74
AC-FT	4310	4650	4250	3890	3600	5100	11160	12210	11090	17530	7630	5310

CAL YR 1989 TOTAL 44783 MEAN 123 MAX 347 MIN 49 AC-FT 88830

WTR YR 1990 TOTAL 45743 MEAN 125 MAX 457 MIN 49 AC-FT 90730

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO

LOCATION.--Lat 40°05'00", long 106°05'15", in NE¼NE¼ sec.2, T.1 N., R.78W., Grand County, Hydrologic Unit 14010001, on left bank about 1,000 ft north of U.S. Highway 40, 1 mi northeast of Hot Sulphur Springs, and 4.5 mi upstream from Beaver Creek.

DRAINAGE AREA.--825 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to 1907 and 1914-18, published as Grand River at Hot Sulphur Springs, and as Grand River at Sulphur Springs 1907-13.

REVISED RECORDS.--WSP 1313: 1905. WSP 1924: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,670 ft, from railroad elevations. July 28, 1904, to Apr. 16, 1906, nonrecording gage on bridge 1.7 mi downstream at different datum. Apr. 17, 1906, to Sept. 18, 1930, nonrecording gage at bridge 1.4 mi downstream at datum 7,651.26 ft, National Geodetic Vertical Datum of 1929. Supplemental water-stage recorder (nonrecording gage prior to Jan. 1, 1963) at different datum at site 1.7 mi downstream, used for winter records some years.

REMARKS.--Estimated daily discharges: Oct. 1-3, 17-20, Nov. 15-20, Nov. 27 to Mar. 29, and Sept. 9-17. Records good except for estimated daily discharges, which are poor. Flow affected by transmountain diversions, storage reservoirs, and diversions upstream from station for irrigation of about 13,000 acres.

AVERAGE DISCHARGE.--39 years (1905-09, 1911-47), 675 ft³/s; 489,000 acre-ft, prior to storage by Lake Granby; 37 years (1954-90), 240 ft³/s; 173,900 acre-ft, subsequent to storage by Lake Granby.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 10,300 ft³/s, June 15, 1921, gage height, 8.7 ft, site and datum then in use; minimum daily, 33 ft³/s, Sept. 27, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 474 ft³/s at 1300 July 8, gage height, 1.45 ft; minimum daily discharge, 53 ft³/s, Feb. 1, 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	73	65	67	53	75	107	189	206	112	183	94
2	60	71	62	67	53	72	151	222	182	208	141	103
3	55	63	63	67	58	69	174	222	165	255	137	108
4	55	71	63	67	58	69	195	214	173	286	136	115
5	56	86	63	66	63	72	191	214	186	269	135	117
6	56	91	67	66	66	80	187	218	221	255	136	106
7	57	87	73	65	66	80	185	239	216	270	136	101
8	58	85	74	61	66	76	184	259	210	421	136	95
9	62	87	73	54	64	74	184	271	236	398	135	92
10	64	88	73	54	63	74	175	259	226	427	133	88
11	62	88	72	58	63	74	148	249	226	425	131	84
12	65	82	65	65	66	72	158	246	261	346	126	82
13	66	81	61	68	69	75	188	261	251	295	126	78
14	68	81	67	68	69	74	188	237	187	282	124	80
15	70	70	72	70	69	71	183	254	168	281	124	84
16	78	69	72	73	70	71	195	343	160	283	121	87
17	85	71	72	73	70	71	190	181	135	290	117	108
18	84	78	81	72	70	67	192	142	114	252	125	135
19	82	78	84	66	71	66	208	155	120	243	122	109
20	76	78	76	63	71	66	212	189	137	240	127	98
21	81	80	70	63	69	68	200	177	148	306	118	98
22	84	78	70	63	69	76	188	142	149	321	111	94
23	83	78	70	62	67	100	181	104	187	289	110	100
24	81	76	70	62	67	105	220	102	198	276	108	82
25	77	75	70	62	67	107	246	99	191	300	106	87
26	77	76	70	62	67	119	248	111	188	254	104	89
27	76	82	70	62	67	120	218	135	189	217	101	88
28	77	79	69	62	70	132	188	142	171	204	101	85
29	75	78	67	62	---	113	195	180	112	195	100	88
30	72	72	67	63	---	114	194	300	102	198	94	93
31	74	---	67	59	---	110	---	270	---	193	96	---
TOTAL	2176	2352	2158	1992	1841	2612	5673	6326	5415	8591	3800	2868
MEAN	70.2	78.4	69.6	64.3	65.7	84.3	189	204	180	277	123	95.6
MAX	85	91	84	73	71	132	248	343	261	427	183	135
MIN	55	63	61	54	53	66	107	99	102	112	94	78
AC-FT	4320	4670	4280	3950	3650	5180	11250	12550	10740	17040	7540	5690

CAL YR 1989 TOTAL 48312 MEAN 132 MAX 377 MIN 55 AC-FT 95830
WTR YR 1990 TOTAL 45804 MEAN 125 MAX 427 MIN 53 AC-FT 90850

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1947 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1947 to current year.

WATER TEMPERATURE: April 1949 to current year.

REMARKS.--Limited temperature data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 524 microsiemens, Dec. 24, 1986; minimum daily, 48 microsiemens, June 2, 1947.

WATER TEMPERATURE: Maximum daily, 29°C, Aug. 3, 1981; minimum daily, freezing point on many days during winter months each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 172 microsiemens, Dec. 1; minimum daily, 114 microsiemens, May 11, 12.

WATER TEMPERATURE: Maximum daily, 24°C, June 30; minimum daily, freezing point on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
DEC 13...	1430	61	143	8.3	0.0	--	58	18	3.1
MAR 29...	1135	128	162	8.0	0.5	11.0	59	18	3.5
JUN 20...	1700	135	146	8.6	23.0	7.6	47	14	3.0
SEP 26...	1100	89	144	8.4	13.0	8.5	58	18	3.2

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
DEC 13...	6.5	0.4	1.2	64	7.0	1.9	0.2	12	89
MAR 29...	7.2	0.4	2.5	62	7.1	3.5	0.2	11	92
JUN 20...	6.5	0.4	1.1	68	4.6	0.7	0.2	13	84
SEP 26...	6.6	0.4	1.4	68	4.4	2.8	0.2	10	87

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)
DEC 13...	0.12	14.7	8	0.39	0.20	0.19	0.20	0.20	0.03	0.03
MAR 29...	0.12	31.7	8	1.0	0.30	0.30	0.60	0.70	0.10	0.10
JUN 20...	0.11	30.6	14	--	<0.10	<0.10	0.50	0.50	0.05	0.02
SEP 26...	0.12	20.9	<1	--	<0.10	<0.10	0.30	0.40	<0.01	<0.01

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL- LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS-SOLVED (UG/L AS CR)
DEC 13...	<1	<1	<1	18	<0.5	<1	<1.0	<1	<1
MAR 29...	3	<1	<1	19	<0.5	<1	<1.0	<1	<5
JUN 20...	<1	<1	<1	15	<0.5	<1	<1.0	<1	<1
SEP 26...	<1	<1	<1	16	<0.5	<1	<1.0	<1	<1

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA- NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)
DEC 13...	3	1	35	1	<1	10	0.1	<0.1
MAR 29...	4	--	190	1	--	54	<0.1	<0.1
JUN 20...	4	1	93	1	<1	20	<0.1	<0.1
SEP 26...	1	2	83	<1	<1	11	<0.1	<0.1

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 13...	1	<1	<1	<1	<1	2.0	<10	4
MAR 29...	2	--	<1	<1	<1	<1.0	<10	5
JUN 20...	1	1	<1	<1	<1	<1.0	<10	4
SEP 26...	<1	1	<1	<1	<1	<1.0	<10	<3

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
ONCE DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	148	172	147	147	150	169	148	128	164	134	126
2	152	151	156	151	148	146	---	148	124	157	136	132
3	152	154	150	149	147	152	158	136	128	158	139	133
4	153	157	153	150	149	150	159	131	133	159	141	133
5	155	152	142	150	150	148	163	132	130	160	139	130
6	152	149	141	147	152	147	164	130	155	159	138	133
7	149	148	146	150	153	149	161	126	123	161	139	135
8	149	150	146	150	148	145	160	122	127	157	135	137
9	149	155	149	147	146	149	159	116	120	156	138	134
10	141	148	144	146	146	148	161	116	126	140	138	137
11	146	147	148	146	145	147	161	114	128	136	133	141
12	146	147	149	147	147	149	164	114	130	136	135	142
13	146	149	152	150	145	152	153	118	134	144	133	143
14	140	151	146	148	145	150	154	121	141	143	133	134
15	138	146	145	147	144	153	154	121	139	144	134	139
16	145	158	144	144	145	149	157	127	140	146	133	139
17	147	147	145	146	147	149	140	139	141	146	132	134
18	147	144	145	148	146	146	138	127	143	150	129	136
19	147	143	145	147	147	146	141	138	147	152	130	138
20	150	151	147	146	147	147	133	123	150	149	130	141
21	155	147	146	145	148	145	140	123	148	152	130	138
22	149	146	146	148	147	147	---	123	152	152	131	145
23	148	142	145	149	146	150	132	123	156	150	133	139
24	146	146	145	148	146	146	124	122	156	148	128	143
25	146	145	142	146	143	151	126	121	155	146	131	141
26	148	143	149	144	148	147	138	120	153	147	125	144
27	146	148	153	145	146	164	142	118	156	146	129	149
28	147	142	151	157	153	156	147	120	160	142	127	145
29	147	153	149	145	---	155	144	118	163	136	128	147
30	150	157	149	152	---	165	143	---	159	137	133	147
31	148	---	146	152	---	166	---	124	---	136	124	---
MEAN	148	149	148	148	147	150	---	---	141	149	133	138

09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
ONCE DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	4.0	.0	.0	.0	.0	1.0	8.0	10.0	14.0	14.0	15.0
2	14.0	1.0	.0	.0	.0	.0	---	5.0	9.0	15.0	13.0	20.0
3	14.0	1.0	.0	.0	.0	.0	6.0	11.0	16.0	17.0	20.0	18.0
4	12.0	1.0	.0	.0	.0	.0	5.0	11.0	16.0	22.0	19.0	14.0
5	11.0	6.0	.0	.0	.0	.0	6.0	8.0	16.0	22.0	21.0	21.0
6	12.0	4.0	.0	.0	.0	.0	3.0	16.0	15.0	20.0	21.0	20.0
7	13.0	3.0	.0	.0	.0	.0	4.0	11.0	17.0	20.0	17.0	15.0
8	10.0	4.0	.0	.0	.0	.0	3.0	10.0	15.0	16.0	20.0	15.0
9	12.0	2.0	.0	.0	.0	.0	6.0	12.0	16.0	17.0	18.0	18.0
10	11.0	5.0	.0	.0	.0	.0	9.0	8.0	15.0	20.0	14.0	15.0
11	12.0	6.0	.0	.0	.0	.0	11.0	8.0	15.0	20.0	18.0	10.0
12	12.0	6.0	.0	.0	.0	.0	4.0	8.0	15.0	21.0	18.0	10.0
13	11.0	2.0	.0	.0	.0	.0	9.0	10.0	14.0	16.0	19.0	11.0
14	10.0	1.0	.0	.0	.0	.0	11.0	12.0	19.0	16.0	19.0	20.0
15	9.0	1.0	.0	.0	.0	.0	11.0	10.0	19.0	19.0	15.0	13.0
16	10.0	.0	.0	.0	.0	.0	6.0	9.0	15.0	16.0	19.0	18.0
17	7.0	1.0	.0	.0	.0	.0	11.0	10.0	18.0	19.0	16.0	13.0
18	7.0	.0	.0	.0	.0	.0	12.0	9.0	18.0	16.0	20.0	14.0
19	7.0	1.0	.0	.0	.0	.0	9.0	11.0	19.0	20.0	20.0	13.0
20	6.0	1.0	.0	.0	.0	.0	11.0	12.0	20.0	17.0	16.0	13.0
21	6.0	1.0	.0	.0	.0	.0	9.0	9.0	13.0	16.0	14.0	16.0
22	9.0	1.0	.0	.0	.0	.0	---	15.0	22.0	19.0	17.0	8.0
23	6.0	1.0	.0	.0	.0	.0	10.0	13.0	18.0	16.0	11.0	16.0
24	9.0	2.0	.0	.0	.0	.0	10.0	16.0	20.0	16.0	19.0	13.0
25	8.0	2.0	.0	.0	.0	.0	7.0	14.0	15.0	15.0	17.0	18.0
26	5.0	2.0	.0	.0	.0	1.0	6.0	14.0	19.0	15.0	19.0	16.0
27	6.0	.0	.0	.0	.0	1.0	8.0	16.0	20.0	19.0	11.0	10.0
28	4.0	.0	.0	.0	.0	1.0	4.0	17.0	21.0	19.0	17.0	16.0
29	3.0	.0	.0	.0	---	7.0	8.0	16.0	21.0	19.0	11.0	17.0
30	3.0	.0	.0	.0	---	1.0	6.0	---	24.0	16.0	12.0	16.0
31	5.0	---	.0	.0	---	6.0	---	13.0	---	17.0	20.0	---
MEAN	9.0	2.0	.0	.0	.0	.5	---	---	17.0	17.7	16.9	15.1

09034900 BOBTAIL CREEK NEAR JONES PASS, CO

LOCATION.--Lat 39°45'37", long 105°54'21", in sec.28, T.3 S., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 320 ft upstream from diversion dam and 0.4 mi south of entrance to August P. Gumlick Tunnel.

DRAINAGE AREA.--5.49 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 10,430 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-24, Oct. 27 to Apr. 18, and Apr. 25 to May 21. Records fair except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 10.3 ft³/s; 7,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290 ft³/s, June 28, 1988, gage height, 5.19 ft; maximum recorded gage height, 7.57 ft, May 15, 1984 (backwater from ice); minimum daily discharge, 0.44 ft³/s, Feb. 11, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 10	1700	*150	*4.55	No other peak greater than base discharge.			

Minimum daily, 0.62 ft³/s, Feb. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.6	.95	.86	.75	.68	.80	3.1	29	43	6.5	4.5
2	2.1	1.5	.90	.86	.75	.68	.82	3.2	28	42	6.6	4.8
3	2.2	1.6	.90	.86	.74	.68	.85	3.2	32	41	6.0	5.6
4	2.3	1.8	.90	.80	.74	.68	.89	3.2	48	41	5.9	5.1
5	2.4	1.7	.94	.80	.74	.68	.92	3.4	64	39	5.5	4.8
6	2.4	1.7	1.0	.80	.70	.68	.92	3.9	72	37	5.2	5.1
7	2.5	1.6	.94	.80	.70	.68	.94	5.4	77	40	4.8	4.8
8	2.5	1.7	.94	.80	.70	.68	.98	5.7	85	41	4.6	4.6
9	2.6	1.7	.94	.80	.70	.68	.98	5.2	79	38	4.5	4.4
10	2.6	1.7	.94	.80	.70	.70	.95	4.8	101	35	4.5	4.3
11	2.6	1.7	.90	.80	.70	.70	.98	5.5	95	32	4.4	4.1
12	2.3	1.7	.90	.80	.70	.70	1.0	5.0	76	28	4.7	4.0
13	2.2	1.6	.90	.80	.70	.66	1.0	4.9	78	26	4.3	3.9
14	2.1	1.5	.90	.80	.70	.66	1.0	5.2	80	26	4.5	3.8
15	2.2	1.4	.90	.80	.70	.70	1.0	6.3	70	23	5.1	3.7
16	2.5	1.5	.90	.80	.70	.70	1.1	5.8	63	20	5.7	3.8
17	2.6	1.6	.86	.80	.70	.70	1.1	5.3	59	18	8.7	5.5
18	2.5	1.5	.86	.80	.70	.70	1.2	5.7	64	17	8.3	4.4
19	2.5	1.4	.86	.80	.70	.70	1.3	6.4	63	16	9.8	5.0
20	2.9	1.4	.86	.80	.70	.71	1.3	7.2	61	18	8.1	4.1
21	3.2	1.3	.86	.80	.70	.73	1.8	9.0	59	19	7.6	4.0
22	3.0	1.2	.86	.80	.70	.75	2.7	12	58	16	7.4	3.8
23	2.9	1.1	.86	.80	.70	.76	4.2	28	58	14	6.9	3.7
24	3.0	1.0	.86	.76	.70	.78	4.8	27	57	13	6.4	3.7
25	3.3	1.0	.86	.76	.70	.79	4.2	26	55	14	5.8	3.9
26	1.8	1.0	.86	.76	.66	.80	3.8	24	54	11	5.4	4.8
27	1.6	.96	.86	.76	.62	.80	3.5	22	53	9.7	5.1	4.0
28	1.6	.96	.86	.76	.68	.80	3.3	29	49	8.6	5.0	5.2
29	1.5	.96	.86	.76	---	.80	3.2	32	46	7.8	4.7	5.4
30	1.5	.96	.86	.76	---	.80	3.1	24	44	7.0	4.4	4.9
31	1.5	---	.86	.76	---	.80	---	27	---	6.6	4.3	---
TOTAL	73.0	42.34	27.65	24.66	19.68	22.36	54.63	358.4	1857	747.7	180.7	133.7
MEAN	2.35	1.41	.89	.80	.70	.72	1.82	11.6	61.9	24.1	5.83	4.46
MAX	3.3	1.8	1.0	.86	.75	.80	4.8	32	101	43	9.8	5.6
MIN	1.5	.96	.86	.76	.62	.66	.80	3.1	28	6.6	4.3	3.7
AC-FT	145	84	55	49	39	44	108	711	3680	1480	358	265

CAL YR 1989 TOTAL 3372.09 MEAN 9.24 MAX 68 MIN .57 AC-FT 6690
WTR YR 1990 TOTAL 3541.82 MEAN 9.70 MAX 101 MIN .62 AC-FT 7030

09035500 WILLIAMS FORK BELOW STEELMAN CREEK, CO

LOCATION.--Lat 39°46'44", long 105°55'40", in sec.20, T.3 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 700 ft downstream from Steelman Creek and 6.5 mi southeast of Leal.

DRAINAGE AREA.--16.3 mi².

PERIOD OF RECORD.--July 1933 to September 1941, published as Williams River below Steelman Creek, October 1965 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Elevation of gage is 9,800 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 21, 1933, nonrecording gage, and July 21, 1933, to Sept. 30, 1941, water-stage recorder at site 600 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 31 to Apr. 20. Records fair except for estimated daily discharges, which are poor. Transmountain diversions upstream from station through August P. Gumlick Tunnel (station 09036000) since May 10, 1940. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--33 years, 25.9 ft³/s; 18,760 acre-ft/yr, including diversions to August P. Gumlick Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441 ft³/s, June 21, 1938, gage height, 2.48 ft, site and datum then in use, from rating curve extended above 260 ft³/s; maximum gage height, 6.96 ft, May 15, 1984 (backwater from ice); minimum daily discharge, 0.20 ft³/s, Mar. 6, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 210 ft³/s at 1800 June 10, gage height, 4.96 ft; minimum daily, 0.42 ft³/s, Feb. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	4.0	.54	.54	.50	.50	.57	2.0	45	95	1.4	11
2	.55	3.5	.52	.54	.50	.47	.61	2.0	17	89	3.9	13
3	.55	.60	.52	.56	.50	.50	.64	1.9	17	86	2.3	15
4	.58	.45	.52	.54	.50	.50	.68	1.9	63	82	1.1	14
5	.55	.45	.52	.53	.50	.50	.70	1.9	64	81	1.0	12
6	.54	.45	.64	.54	.50	.50	.66	2.2	63	75	4.1	13
7	.54	1.0	.54	.54	.50	.50	.72	2.9	59	77	.94	12
8	.54	.80	.54	.54	.50	.50	.73	2.8	68	81	.86	11
9	2.4	.60	.54	.54	.50	.50	.72	2.6	124	72	.83	10
10	5.3	.60	.54	.54	.50	.54	.70	2.7	143	67	.89	10
11	4.9	.60	.54	.54	.50	.54	.74	3.2	166	62	.91	9.5
12	4.0	.60	.54	.54	.50	.54	.76	3.1	111	57	1.0	9.1
13	.55	.60	.54	.54	.50	.68	.78	2.9	73	50	.99	8.8
14	.47	.58	.54	.54	.50	.56	.83	3.3	87	55	.93	8.2
15	.47	.54	.54	.54	.50	.53	.88	3.5	71	50	.98	8.0
16	.55	.58	.54	.54	.50	.53	.94	3.1	37	44	1.2	4.4
17	.52	.66	.52	.64	.50	.53	1.0	3.1	24	40	1.8	1.3
18	2.7	.64	.52	.54	.50	.52	1.3	3.5	80	39	1.7	.89
19	3.3	.60	.52	.54	.50	.50	1.1	3.8	30	37	2.0	.82
20	3.2	.59	.52	.54	.50	.54	1.3	4.4	24	40	1.3	.67
21	.62	.57	.52	.54	.50	.57	1.7	5.7	28	40	1.2	.62
22	.54	.56	.52	.54	.50	.54	2.4	8.3	9.3	35	1.2	.58
23	.56	.54	.52	.54	.50	.56	3.4	12	89	32	1.0	.55
24	.55	.56	.52	.54	.47	.56	2.9	17	141	30	.95	.55
25	.50	.56	.52	.54	.50	.56	2.1	35	137	33	.89	.56
26	1.8	.56	.52	.54	.42	.57	3.4	18	88	28	.83	.77
27	2.6	.54	.52	.54	.47	1.0	2.1	14	6.3	26	.79	.63
28	.92	.54	.52	.54	.50	1.2	2.0	16	5.6	25	.77	1.5
29	.45	.54	1.0	.54	---	.60	2.0	42	50	24	.75	.99
30	3.6	.54	.54	1	---	.60	2.0	17	100	23	.74	.74
31	6.6	---	.54	.50	---	.59	---	17	---	17	5.2	---
TOTAL	51.50	23.95	16.98	17.27	13.86	17.83	40.36	258.8	2020.2	1592	44.45	180.17
MEAN	1.66	.80	.55	.56	.49	.58	1.35	8.35	67.3	51.4	1.43	6.01
MAX	6.6	4.0	1.0	1.0	.50	1.2	3.4	42	166	95	5.2	15
MIN	.45	.45	.52	.50	.42	.47	.57	1.9	5.6	17	.74	.55
AC-FT	102	48	34	34	27	35	80	513	4010	3160	88	357

CAL YR 1989 TOTAL 3498.86 MEAN 9.59 MAX 98 MIN .45 AC-FT 6940
WTR YR 1990 TOTAL 4277.37 MEAN 11.7 MAX 166 MIN .42 AC-FT 8480

09035700 WILLIAMS FORK ABOVE DARLING CREEK, NEAR LEAL, CO

LOCATION.--Lat 39°47'22", long 106°01'18", in NW¼SW¼ sec.16, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 1.0 mi upstream from Darling Creek and 1.9 mi southeast of Leal.

DRAINAGE AREA.--34.7 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,970 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1972, May 6, 1981 to Jan. 31, 1983, at site 0.6 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 15 to Apr. 6. Records good except for estimated daily discharges, which are poor. Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09036000). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 36.9 ft³/s; 26,730 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 677 ft³/s, June 24, 1971, gage height, 7.12 ft, site and datum then in use, from rating curve extended above 430 ft³/s; minimum daily, 2.7 ft³/s, Apr. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 203 ft³/s at 2200 June 10, gage height, 3.88 ft; minimum daily, 3.5 ft³/s, Feb. 1-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	6.9	4.5	4.0	3.5	4.0	5.0	12	73	125	18	15
2	7.7	6.5	4.5	4.0	3.5	4.0	5.4	12	47	119	18	18
3	7.7	6.5	4.5	4.0	3.5	4.0	5.8	12	49	118	17	17
4	7.7	6.4	4.5	4.0	3.5	4.0	6.3	12	93	113	16	18
5	7.7	5.5	4.5	4.0	3.5	4.0	6.7	13	109	116	15	16
6	7.7	4.0	4.5	4.0	3.7	4.0	7.3	15	120	112	16	16
7	7.7	4.0	4.5	4.0	3.7	4.0	7.2	17	121	104	14	16
8	7.7	4.0	4.5	4.0	3.7	4.0	6.9	17	129	116	13	16
9	7.7	4.0	4.5	4.0	3.7	4.0	6.9	16	169	104	13	15
10	9.2	3.8	4.5	4.0	3.7	4.0	6.6	16	185	94	13	15
11	9.2	4.2	4.5	4.0	3.7	4.0	6.9	17	197	87	13	14
12	9.0	4.7	4.5	4.0	3.7	4.0	7.4	16	182	78	13	14
13	7.6	4.7	4.5	4.0	3.7	4.0	6.9	16	147	69	13	14
14	7.3	4.8	4.5	4.0	3.7	4.0	8.3	17	161	71	12	13
15	7.3	5.0	4.5	4.0	3.7	4.0	10	19	153	69	12	13
16	7.3	5.3	4.5	4.0	3.7	4.0	11	17	124	60	13	12
17	7.3	5.6	4.3	4.0	3.7	4.0	13	16	107	55	16	11
18	7.4	5.4	4.1	4.0	3.7	4.0	13	18	145	51	15	9.8
19	7.7	5.2	4.0	4.0	3.7	4.0	14	18	116	49	17	8.8
20	8.1	5.0	4.0	4.0	3.7	4.2	14	19	102	51	13	8.1
21	7.5	4.8	4.0	4.0	3.7	4.3	15	20	108	57	14	8.1
22	7.3	4.7	4.0	4.0	3.7	4.5	16	25	84	47	15	8.1
23	7.3	4.5	4.0	4.0	3.7	4.5	17	31	123	42	12	7.7
24	7.3	4.5	4.0	4.0	3.7	4.5	17	41	176	39	11	7.9
25	7.3	4.5	4.0	4.0	3.7	4.5	15	53	169	41	10	8.9
26	7.3	4.5	4.0	4.0	3.8	4.5	14	46	147	36	9.7	8.1
27	7.7	4.5	4.0	4.0	4.0	4.8	14	39	64	35	9.1	8.9
28	7.5	4.5	4.0	4.0	4.0	5.0	12	46	57	33	8.7	9.8
29	7.3	4.5	4.0	4.0	---	5.0	12	76	79	33	8.4	8.8
30	7.3	4.5	4.0	3.8	---	5.0	12	46	132	32	8.3	8.1
31	7.3	---	4.0	3.7	---	5.0	---	49	---	29	8.9	---
TOTAL	237.8	147.0	132.4	123.5	103.3	131.8	312.6	787	3668	2185	405.1	364.1
MEAN	7.67	4.90	4.27	3.98	3.69	4.25	10.4	25.4	122	70.5	13.1	12.1
MAX	9.2	6.9	4.5	4.0	4.0	5.0	17	76	197	125	18	18
MIN	7.3	3.8	4.0	3.7	3.5	4.0	5.0	12	47	29	8.3	7.7
AC-FT	472	292	263	245	205	261	620	1560	7280	4330	804	722

CAL YR 1989 TOTAL 8509.3 MEAN 23.3 MAX 147 MIN 3.8 AC-FT 16880
WTR YR 1990 TOTAL 8597.6 MEAN 23.6 MAX 197 MIN 3.5 AC-FT 17050

09035800 DARLING CREEK NEAR LEAL, CO

LOCATION.--Lat 39°48'20", long 106°01'05", in NE¼SW¼ sec.9, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 0.6 mi upstream from mouth and 1.4 mi southeast of Leal.

DRAINAGE AREA.--8.21 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,090 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 20 to Apr. 11. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 9.58 ft³/s; 6,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 241 ft³/s, June 30, 1984, gage height, 4.30 ft, from rating curve extended above 100 ft³/s; minimum daily, 1.0 ft³/s, Jan. 12, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 67 ft³/s at 1900 June 11, gage height, 3.45 ft; minimum daily, 1.4 ft³/s, Jan. 7-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	2.7	2.0	1.6	1.5	1.5	1.8	2.7	22	23	6.5	3.5
2	3.4	2.7	2.0	1.6	1.5	1.5	1.8	3.0	20	21	6.5	4.9
3	3.4	2.5	2.0	1.6	1.5	1.5	1.8	3.1	23	21	6.2	4.3
4	3.6	2.2	2.0	1.6	1.5	1.5	1.8	3.2	32	20	6.0	3.7
5	3.5	2.5	2.0	1.6	1.5	1.5	1.8	3.4	39	20	5.7	3.6
6	3.5	2.5	2.0	1.5	1.5	1.5	1.8	4.1	45	18	5.6	3.6
7	3.5	2.5	2.0	1.4	1.5	1.5	1.8	5.0	46	17	5.4	3.4
8	3.5	2.5	2.0	1.4	1.5	1.5	1.8	4.9	48	18	5.3	3.4
9	3.5	2.5	2.0	1.4	1.5	1.5	1.8	4.3	49	17	5.3	3.2
10	3.5	2.5	2.0	1.4	1.5	1.5	1.8	4.6	50	16	5.3	3.2
11	3.4	2.3	2.0	1.4	1.5	1.6	1.8	4.9	52	14	5.4	3.1
12	3.3	2.3	2.0	1.4	1.5	1.6	1.7	4.6	47	12	6.0	3.0
13	3.3	2.3	1.9	1.4	1.5	1.7	1.8	4.8	46	11	5.4	2.9
14	3.3	2.2	1.8	1.4	1.5	1.7	1.9	5.4	50	11	5.3	2.9
15	3.4	2.1	1.8	1.4	1.5	1.7	2.2	5.6	47	10	5.3	2.8
16	3.6	2.1	1.8	1.4	1.5	1.7	2.5	5.1	43	9.6	5.8	2.9
17	3.2	2.1	1.8	1.4	1.5	1.7	2.7	5.5	42	9.0	6.8	4.9
18	3.0	2.0	1.7	1.4	1.5	1.7	2.8	6.1	44	9.0	6.4	3.7
19	2.8	2.0	1.7	1.4	1.5	1.7	2.7	6.2	44	8.6	6.9	3.5
20	3.3	2.0	1.6	1.4	1.5	1.7	2.8	6.4	42	9.9	5.6	3.2
21	3.4	2.0	1.6	1.5	1.5	1.7	3.0	7.8	41	9.6	5.3	3.2
22	3.3	2.0	1.6	1.5	1.5	1.7	3.2	9.7	40	8.6	5.1	3.1
23	3.0	2.0	1.6	1.5	1.5	1.7	3.5	13	39	8.0	4.5	3.0
24	3.0	2.0	1.6	1.5	1.5	1.7	3.5	18	36	7.7	4.0	3.0
25	2.9	2.0	1.6	1.5	1.5	1.7	3.1	20	34	8.7	3.8	3.1
26	3.0	2.0	1.6	1.5	1.5	1.7	2.9	19	32	7.4	3.7	3.9
27	2.8	2.0	1.6	1.5	1.5	1.7	2.9	18	30	7.1	3.6	3.2
28	2.9	2.0	1.6	1.5	1.5	1.8	3.0	21	28	6.9	3.5	3.3
29	2.5	2.0	1.6	1.5	---	1.8	3.9	24	26	7.3	3.4	3.5
30	2.5	2.0	1.6	1.5	---	1.8	3.4	20	24	6.8	3.5	3.5
31	2.7	---	1.6	1.5	---	1.8	---	22	---	6.5	3.5	---
TOTAL	99.5	66.5	55.7	45.6	42.0	50.9	73.3	285.4	1161	379.7	160.6	102.5
MEAN	3.21	2.22	1.80	1.47	1.50	1.64	2.44	9.21	38.7	12.2	5.18	3.42
MAX	3.6	2.7	2.0	1.6	1.5	1.8	3.9	24	52	23	6.9	4.9
MIN	2.5	2.0	1.6	1.4	1.5	1.5	1.7	2.7	20	6.5	3.4	2.8
AC-FT	197	132	110	90	83	101	145	566	2300	753	319	203

CAL YR 1989 TOTAL 2253.3 MEAN 6.17 MAX 37 MIN 1.3 AC-FT 4470
WTR YR 1990 TOTAL 2522.7 MEAN 6.91 MAX 52 MIN 1.4 AC-FT 5000

09035900 SOUTH FORK WILLIAMS FORK NEAR LEAL, CO

LOCATION.--Lat 39°47'45", long 106°01'48", in NE¼ sec.17, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 800 ft upstream from highway bridge, 0.6 mi upstream from mouth, and 1.2 mi southeast of Leal.

DRAINAGE AREA.--27.3 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,950 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 19, 20, 27, 29, Oct. 31 to Apr. 26 and Apr. 29 to May 6. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years, 32.5 ft³/s; 23,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 464 ft³/s, June 15, 1978, gage height 3.37 ft; maximum gage height, 4.22 ft, Nov. 22, 1979 (backwater from ice); minimum daily discharge, 2.6 ft³/s, Mar. 6, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	2200	*400	*3.87	No other peak greater than base discharge.			
Minimum daily, 5.8 ft ³ /s, Mar. 19-23.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	10	8.0	7.2	7.0	6.0	14	102	76	21	13
2	11	11	10	8.0	7.0	7.0	6.0	14	93	71	22	17
3	11	10	10	8.0	7.0	7.0	6.0	14	98	74	21	14
4	11	10	10	8.0	7.0	7.0	6.0	14	139	72	20	16
5	11	10	10	8.0	7.0	7.0	6.0	16	179	71	19	13
6	11	10	10	8.0	7.0	7.0	6.0	17	203	69	19	14
7	11	10	10	8.0	7.0	7.0	6.0	21	204	61	18	13
8	11	10	10	8.0	7.0	7.0	6.0	25	236	68	17	13
9	11	10	10	8.0	7.0	7.0	6.0	24	262	62	18	12
10	11	10	10	8.0	7.0	7.0	6.0	25	288	57	17	12
11	11	10	10	8.0	7.0	7.0	6.2	26	309	53	17	12
12	11	10	10	8.0	7.0	7.0	6.4	24	274	48	17	11
13	11	10	9.7	8.0	7.0	7.0	6.6	24	235	45	17	11
14	11	10	9.4	8.0	7.0	7.0	6.8	24	260	46	16	11
15	11	10	9.2	8.0	7.0	6.6	7.8	28	229	46	17	10
16	12	10	8.8	8.0	7.0	6.4	9.0	26	197	40	19	10
17	11	10	8.4	8.0	7.0	6.2	10	26	176	37	21	14
18	11	10	8.0	8.0	7.0	6.0	11	28	174	36	21	15
19	11	10	8.0	8.0	7.0	5.8	13	30	185	35	23	14
20	11	10	8.0	8.0	7.0	5.8	15	33	168	35	18	12
21	12	10	8.0	8.0	7.0	5.8	17	38	148	39	17	12
22	11	10	8.0	8.0	7.0	5.8	19	47	138	34	18	11
23	11	10	8.0	8.0	7.0	5.8	22	60	134	30	16	11
24	11	10	8.0	8.0	7.0	6.0	25	84	127	29	15	11
25	11	10	8.0	8.0	7.0	6.0	22	93	118	31	15	11
26	11	10	8.0	8.0	7.0	6.0	20	90	113	27	14	13
27	11	10	8.0	8.0	7.0	6.0	17	85	106	26	13	11
28	11	10	8.0	8.0	7.0	6.0	17	104	97	24	13	13
29	11	10	8.0	7.8	---	6.0	16	126	89	24	13	14
30	11	10	8.0	7.6	---	6.0	14	92	82	23	13	14
31	11	---	8.0	7.4	---	6.0	---	100	---	22	13	---
TOTAL	343	302	277.5	246.8	196.2	200.2	340.8	1372	5163	1411	538	378
MEAN	11.1	10.1	8.95	7.96	7.01	6.46	11.4	44.3	172	45.5	17.4	12.6
MAX	12	11	10	8.0	7.2	7.0	25	126	309	76	23	17
MIN	11	10	8.0	7.4	7.0	5.8	6.0	14	82	22	13	10
AC-FT	680	599	550	490	389	397	676	2720	10240	2800	1070	750

CAL YR 1989 TOTAL 10788.6 MEAN 29.6 MAX 177 MIN 6.5 AC-FT 21400
WTR YR 1990 TOTAL 10768.5 MEAN 29.5 MAX 309 MIN 5.8 AC-FT 21360

09036000 WILLIAMS FORK NEAR LEAL, CO

LOCATION.--Lat 39°50'02", long 106°03'21", in sec.31, T.2 S., R.77 W., Grand County, Hydrologic Unit 14010001, on right bank at downstream side of bridge, 100 ft downstream from Kinney Creek, and 1.7 mi northwest of Leal.

DRAINAGE AREA.--89.5 mi².

PERIOD OF RECORD.--July 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Prior to October 1958, published as Williams River near Leal.

REVISED RECORDS.--WSP 1733: 1951. WSP 2124: Drainage area. WRD Colo. 1973: 1972.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,790 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 16, 1953, at site 15 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Jan. 4, 18, and 21. Records good. Transmountain diversion upstream from station through August P. Gumlick Tunnel (see table below for figures of diversion). Diversions for irrigation of about 200 acres of hay meadows upstream from station and about 40 acres downstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Diversions, in acre-feet, through August P. Gumlick Tunnel, provided by Colorado Division of Water Resources.

AVERAGE DISCHARGE.--57 years, 104 ft³/s; 75,350 acre-ft/yr, including diversions to August P. Gumlick Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft³/s, June 10, 1952, gage height, 4.23 ft; maximum gage height, 5.46 ft, June 29, 1971 (backwater from log); minimum daily discharge, 13 ft³/s, at times in 1939, 1963, 1964, and 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 770 ft³/s at 2300 June 11, gage height, 3.45 ft; minimum daily, 14 ft³/s, Feb. 24, 26 and Mar. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	25	18	17	15	15	17	32	228	272	60	37
2	22	22	17	17	15	14	18	34	202	254	59	53
3	23	27	17	17	15	15	19	34	199	254	57	52
4	25	30	17	16	15	15	20	34	295	251	53	54
5	26	29	18	16	15	15	21	37	370	245	51	46
6	26	29	19	16	15	15	20	43	425	246	49	46
7	27	28	18	16	15	15	21	56	448	218	47	45
8	27	30	18	16	15	15	22	57	473	245	45	42
9	28	30	18	16	15	15	22	51	552	226	45	39
10	29	30	18	16	15	16	21	48	601	201	45	38
11	30	30	18	16	15	16	22	56	658	189	46	37
12	25	29	18	16	15	16	23	50	614	170	46	35
13	24	29	18	16	15	15	23	49	491	156	47	34
14	23	26	18	16	15	15	24	52	544	158	44	34
15	24	25	18	16	15	16	31	64	515	157	47	33
16	28	26	18	16	15	16	33	58	437	144	50	33
17	29	29	17	16	15	16	36	52	392	134	61	40
18	28	25	17	16	15	16	39	58	443	126	57	39
19	27	24	17	16	15	15	40	59	413	123	64	34
20	30	22	17	16	15	16	40	64	380	122	49	31
21	35	20	17	16	15	17	44	67	372	137	47	29
22	33	19	17	16	15	16	47	95	333	120	48	28
23	32	18	17	16	15	17	53	122	365	107	42	28
24	32	19	17	16	14	17	55	169	438	101	40	28
25	32	19	17	16	15	17	47	196	413	110	38	30
26	33	19	17	16	14	17	42	191	383	95	36	37
27	24	18	17	16	15	18	36	171	263	88	35	34
28	24	18	17	16	15	19	35	197	239	83	33	35
29	23	18	17	15	---	18	34	264	237	83	33	41
30	23	18	17	15	---	18	32	199	289	80	33	42
31	22	---	17	15	---	18	---	211	---	75	33	---
TOTAL	836	731	541	496	418	499	937	2870	12012	4970	1440	1134
MEAN	27.0	24.4	17.5	16.0	14.9	16.1	31.2	92.6	400	160	46.5	37.8
MAX	35	30	19	17	15	19	55	264	658	272	64	54
MIN	22	18	17	15	14	14	17	32	199	75	33	28
AC-FT	1660	1450	1070	984	829	990	1860	5690	23830	9860	2860	2250
a	232	244	184	119	76	85	235	1310	5610	18	771	315

CAL YR 1989 TOTAL 24814 MEAN 68.0 MAX 347 MIN 15 AC-FT 49220
WTR YR 1990 TOTAL 26884 MEAN 73.7 MAX 658 MIN 14 AC-FT 53320

a-Diversions, in acre-feet, through August P. Gumlick Tunnel, provided by Colorado Division of Water Resources.

09037500 WILLIAMS FORK NEAR PARSHALL, CO

LOCATION.--Lat 40°00'01", long 106°10'45", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.1 N., R.78 W., Grand County, Hydrologic Unit 14010001, on left bank 150 ft downstream from bridge on State Highway 286, 3.7 mi downstream from Skylark Creek, 3.9 mi south of Parshall, and 4.2 mi upstream from Williams Fork Reservoir Dam.

DRAINAGE AREA.--184 mi².

PERIOD OF RECORD.--July 1904 to September 1924, June 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Published as "near (Hot) Sulphur Springs" 1904-12 and as Williams River near Parshall June 1933 to September 1958. Water-quality data available, April 1986 to September 1987.

REVISED RECORDS.--WSP 1243: 1918. WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,808.95 ft. (Denver Board of Water Commissioners Datum). See WSP 1733 for history of changes prior to Aug. 9, 1938. Aug. 10, 1938 to Aug. 19, 1983 gage located on rightbank at present datum.

REMARKS.--Estimated daily discharges: Nov. 3, Nov. 17 to Apr. 5, June 10-12, and July 11-24. Records good except for estimated daily discharges, which are poor. Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09036000). Diversions upstream from station for irrigation of about 1,300 acres upstream from station, and about 2,500 acres downstream from station. About 150 acres upstream from station irrigated by diversions into the drainage area. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--77 years, 135 ft³/s; 97,810 acre-ft/yr, including diversion to August P. Gumlick Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,620 ft³/s, June 14, 1918, gage height, 6.05 ft, site and datum then in use, from rating curve extended above 1,400 ft³/s; minimum daily, 4.8 ft³/s, May 6, 8-10, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 803 ft³/s at 0300 June 15, gage height, 3.22 ft; minimum daily, 9.3 ft³/s, Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	43	29	30	29	24	27	37	168	177	53	12
2	33	41	28	30	27	24	29	40	165	155	41	18
3	34	45	28	30	26	24	31	40	136	130	43	32
4	34	47	29	30	26	24	33	39	187	152	30	29
5	37	43	30	30	26	24	35	41	277	94	14	21
6	34	40	32	30	26	24	35	44	358	144	13	20
7	35	39	31	30	26	24	36	60	366	80	13	19
8	35	40	31	30	26	24	39	64	365	201	12	15
9	37	39	31	30	26	24	41	56	450	161	13	13
10	37	37	31	30	26	25	37	52	511	77	13	12
11	39	37	31	30	26	26	36	59	614	35	13	12
12	39	36	31	30	26	26	37	54	623	30	13	11
13	37	36	31	30	26	25	36	54	452	25	16	9.8
14	36	35	31	30	26	24	34	60	667	25	41	9.3
15	36	29	31	30	26	25	47	77	670	25	44	34
16	42	35	31	30	26	25	51	79	567	24	56	48
17	41	40	30	30	25	25	54	66	501	23	60	58
18	36	44	30	30	25	25	57	64	514	22	62	68
19	30	41	30	30	24	24	59	62	529	21	68	51
20	34	39	30	30	24	25	62	65	473	25	52	48
21	41	38	30	30	24	26	61	68	446	40	47	45
22	40	35	30	30	24	25	50	76	383	33	43	43
23	37	30	30	30	24	26	51	95	378	27	39	38
24	36	31	30	30	23	26	56	140	514	24	35	34
25	39	31	30	30	23	26	50	189	483	33	31	36
26	40	30	30	30	23	26	44	180	438	31	19	47
27	36	29	30	30	24	27	38	153	231	26	19	43
28	40	29	30	30	25	29	37	171	165	21	18	40
29	39	29	30	29	---	28	37	243	118	19	16	46
30	39	29	30	29	---	28	37	194	211	45	12	45
31	36	---	30	29	---	28	---	196	---	67	13	---
TOTAL	1143	1097	936	927	708	786	1277	2818	11960	1992	962	957.1
MEAN	36.9	36.6	30.2	29.9	25.3	25.4	42.6	90.9	399	64.3	31.0	31.9
MAX	42	47	32	30	29	29	62	243	670	201	68	68
MIN	30	29	28	29	23	24	27	37	118	19	12	9.3
AC-FT	2270	2180	1860	1840	1400	1560	2530	5590	23720	3950	1910	1900

CAL YR 1989 TOTAL 23051 MEAN 63.2 MAX 380 MIN 11 AC-FT 45720
WTR YR 1990 TOTAL 25563.1 MEAN 70.0 MAX 670 MIN 9.3 AC-FT 50700

09038000 WILLIAMS FORK RESERVOIR NEAR PARSHALL, CO

LOCATION.--Lat 40°02'06", long 106°12'17", in SE¼ sec.23, T.1 N., R.79 W., Grand County, Hydrologic Unit 14010001, at dam on Williams Fork, 2.1 mi upstream from mouth, and 2.2 mi southwest of Parshall.

DRAINAGE AREA.--230 mi².

PERIOD OF RECORD.--April 1939 to current year. Prior to October 1948, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Non recording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city engineer of Denver); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete-arch dam completed in October 1939; storage began April 1939; dam was enlarged Dec. 5, 1956, to Apr. 22, 1959. Enlarged capacity, 96,820 acre-ft, between elevations 7,634 ft, invert of outlet, and 7,811 ft, top of radial gates on spillway. No dead storage. Figures given represent usable contents. Reservoir is used for power development and to store water to compensate for water diverted through August P. Gumlick Tunnel. Water is released during periods of low flow in Colorado River to supply decreed prior water rights. Records provided by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 97,130 acre-ft, July 9, 1962, elevation, 7,811.19 ft; no contents at times in 1958 (construction) and 1966 (drained for repairs).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 96,170 acre-ft, July 17, elevation, 7,810.60 ft; minimum, 60,620 acre-ft, Dec. 28, 29, elevation, 7,784.41 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	7,792.15	69,910	-
Oct. 31.	7,788.76	65,710	-4,200
Nov. 30.	7,784.90	61,180	-4,530
Dec. 31.	7,784.44	60,660	-520
CAL YR 1989			-810
Jan. 31.	7,785.10	61,410	+750
Feb. 28.	7,786.27	62,760	+1,350
Mar. 31.	7,788.19	65,030	+2,270
Apr. 30.	7,790.52	67,860	+2,830
May 31.	7,795.62	74,390	+6,530
June 30.	7,809.03	93,660	+19,270
July 31.	7,809.15	93,850	+190
Aug. 31.	7,802.67	84,090	-9,760
Sept. 30.	7,799.75	79,970	-4,120
WTR YR 1990			+10,060

09038500 WILLIAMS FORK BELOW WILLIAMS FORK RESERVOIR, CO

LOCATION.--Lat 40°02'07", long 106°12'17", in SE¼ sec.23, T.1 N., R.79 W., Grand County, Hydrologic Unit 14010001, on left bank 400 ft downstream from Williams Fork Reservoir, 2.1 mi upstream from mouth, and 2.1 mi southwest of Parshall.

DRAINAGE AREA.--230 mi².

PERIOD OF RECORD.--October 1948 to September 1954, August 1958 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1958, published as Williams River below Williams Fork Reservoir. Water-quality data available, April 1986 to September 1987.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Datum of gage is 7,615.0 ft, (Denver Board of Water Commissioners Datum). See WSP 1713 or 1733 for history of changes prior to Oct. 21, 1959.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Williams Fork Reservoir (station 09038000). Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09036000). Diversions upstream from station for irrigation of about 3,200 acres upstream from station and about 100 acres downstream from station. About 450 acres upstream from station irrigated by diversion into the drainage area. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--38 years, 127 ft³/s; 92,010 acre-ft/yr, adjusted for storage in Williams Fork Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,640 ft³/s, June 20, 1953, gage height, 8.50 ft, site and datum then in use, from rating curve extended above 1,500 ft³/s; no flow for part of Apr. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 257 ft³/s at 0815 Nov. 28, and at 1215 June 14, gage height, 2.28 ft; minimum daily, 14 ft³/s, May 24 to June 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	109	27	38	17	16	15	15	14	163	235	110
2	110	109	28	38	17	16	15	16	14	163	236	109
3	109	108	28	38	17	16	15	16	14	163	238	109
4	109	108	28	38	17	16	15	16	15	163	241	109
5	109	109	28	38	16	15	15	16	15	117	243	111
6	111	109	28	29	16	15	15	16	15	22	212	111
7	111	109	28	24	16	16	16	16	15	21	165	110
8	111	109	28	24	15	16	16	16	15	21	169	109
9	112	109	47	24	15	16	16	16	15	22	170	109
10	113	109	56	24	15	16	16	16	15	22	168	109
11	112	109	56	24	15	16	16	16	15	22	169	109
12	110	111	56	24	15	16	16	16	15	23	170	109
13	109	111	56	24	16	16	16	16	31	28	173	109
14	109	111	56	24	17	16	16	16	129	25	172	108
15	109	110	56	24	17	15	16	16	235	26	171	108
16	111	109	56	24	17	15	16	16	232	28	171	108
17	111	108	56	24	17	15	16	16	231	77	171	107
18	111	108	56	24	17	15	15	16	111	137	171	107
19	112	109	55	24	17	15	15	16	15	162	172	108
20	111	111	56	25	17	15	15	16	15	164	171	108
21	111	111	56	26	16	15	15	16	15	163	170	108
22	110	111	56	26	16	15	15	16	15	164	169	108
23	109	110	56	26	16	16	16	15	15	163	219	108
24	109	109	56	26	16	15	15	14	15	123	243	108
25	109	109	56	26	16	15	15	14	15	108	242	108
26	109	109	56	26	16	16	15	14	15	107	242	108
27	108	111	56	26	16	16	15	14	15	103	244	108
28	108	210	50	26	16	16	15	14	112	173	245	107
29	108	248	38	22	---	15	15	14	165	231	155	106
30	109	146	38	17	---	15	15	14	164	233	110	107
31	109	---	38	17	---	15	---	14	---	235	109	---
TOTAL	3410	3559	1441	820	454	481	462	478	1722	3372	5936	3253
MEAN	110	119	46.5	26.5	16.2	15.5	15.4	15.4	57.4	109	191	108
MAX	113	248	56	38	17	16	16	16	235	235	245	111
MIN	108	108	27	17	15	15	15	14	14	21	109	106
AC-FT	6760	7060	2860	1630	901	954	916	948	3420	6690	11770	6450

CAL YR 1989 TOTAL 31015.3 MEAN 85.0 MAX 277 MIN 7.7 AC-FT 61520
WTR YR 1990 TOTAL 25388 MEAN 69.6 MAX 248 MIN 14 AC-FT 50360

09039000 TROUBLESOME CREEK NEAR PEARMONT, CO

LOCATION.--Lat 40°13'03", long 106°18'45", in SE¼ sec.14, T.3 N., R.80 W., Grand County, Hydrologic Unit 14010001, on left bank 45 ft downstream from small tributary, 3 mi north of Pearmont, 4 mi downstream from Rabbit Ear Creek, 5.2 mi upstream from East Fork, and 12 mi northeast of Kremmling.

DRAINAGE AREA.--44.6 mi².

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,049 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 2-3, 15-18, 20-24, 26-30, Dec. 1 to Feb. 24, Feb. 26 to Mar. 2, Mar. 7, and June 23 to July 12. Records good except for estimated daily discharges, which are poor. One diversion upstream from station for irrigation of about 250 acres downstream from station. Flow partly regulated during irrigation season by one reservoir, capacity, 1,070 acre-ft, upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--37 years, 30.2 ft³/s; 21,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 630 ft³/s, June 25, 1983, gage height, 2.81 ft; maximum gage height, 3.93 ft, Mar. 31, 1965 (backwater from ice); minimum daily discharge, 4.5 ft³/s, Dec. 20-24, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 92 ft³/s at 2200 May 24, gage height, 1.28 ft; minimum daily, 7.9 ft³/s, Mar. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	10	9.0	9.0	8.4	14	18	74	25	17	12
2	12	12	10	9.0	9.0	8.2	14	19	70	25	17	12
3	12	13	10	9.0	9.0	8.2	15	20	66	24	16	15
4	13	13	10	9.0	9.0	8.4	15	19	69	23	15	14
5	12	13	10	9.0	9.0	8.9	16	19	78	22	14	13
6	12	13	10	9.0	9.0	8.1	16	20	86	22	14	13
7	12	13	10	9.0	9.0	8.4	17	23	87	21	14	12
8	12	13	10	9.0	9.0	8.6	17	28	85	20	14	12
9	12	12	10	9.0	9.0	8.9	17	26	81	20	14	12
10	12	12	10	9.0	9.0	8.4	16	25	77	19	13	11
11	12	12	10	9.0	9.0	8.6	17	28	74	19	13	11
12	12	12	9.7	9.0	9.0	8.5	17	27	85	18	15	11
13	12	12	9.5	9.0	9.3	8.3	17	26	78	18	15	11
14	12	12	9.2	9.0	9.6	8.6	17	25	68	18	14	11
15	12	12	9.0	9.0	10	8.3	18	29	64	17	14	11
16	14	12	9.0	9.0	10	8.2	25	30	61	18	14	10
17	13	11	9.0	9.0	10	8.1	23	29	57	17	15	13
18	11	11	9.0	9.0	10	7.9	24	30	53	17	15	14
19	11	11	9.0	9.0	10	8.1	24	31	47	16	18	12
20	12	11	9.0	9.0	10	8.7	25	34	46	17	15	12
21	13	11	9.0	9.0	10	9.2	25	37	37	17	14	11
22	13	11	9.0	9.0	10	9.8	26	46	36	15	14	11
23	12	11	9.0	9.0	10	10	26	59	34	19	14	11
24	12	11	9.0	9.0	10	10	24	79	33	29	14	10
25	12	11	9.0	9.0	9.8	10	25	89	32	34	13	10
26	13	11	9.0	9.0	9.4	11	24	89	30	31	13	9.9
27	12	11	9.0	9.0	9.0	11	21	81	29	30	13	10
28	13	11	9.0	9.0	8.7	13	21	75	28	28	12	10
29	11	10	9.0	9.0	---	14	21	84	27	26	12	11
30	12	10	9.0	9.0	---	13	18	78	26	22	12	10
31	13	---	9.0	9.0	---	13	---	77	---	16	12	---
TOTAL	378	350	291.4	279.0	263.8	291.8	595	1300	1718	663	439	345.9
MEAN	12.2	11.7	9.40	9.00	9.42	9.41	19.8	41.9	57.3	21.4	14.2	11.5
MAX	14	13	10	9.0	10	14	26	89	87	34	18	15
MIN	11	10	9.0	9.0	8.7	7.9	14	18	26	15	12	9.9
AC-FT	750	694	578	553	523	579	1180	2580	3410	1320	871	686

CAL YR 1989 TOTAL 6884.2 MEAN 18.9 MAX 77 MIN 8.8 AC-FT 13650
WTR YR 1990 TOTAL 6914.9 MEAN 18.9 MAX 89 MIN 7.9 AC-FT 13720

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO

LOCATION.--Lat 40°12'09", long 106°25'19", in SE¼SE¼ sec.23, T.3 N., R.81 W., Grand County, Hydrologic Unit 14010001, on left bank at upstream side of box culverts on U.S. Highway 40, 10.9 mi north of Kremmling, on U.S. Highway 40.

DRAINAGE AREA.--145 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to September 1990.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,520 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 1-17, May 11-15, July 22-23, July 31 to Aug. 3, and Sept. 3-11. Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 465 ft³/s, May 25, 1990, gage height, 4.82 ft; minimum daily, 1.2 ft³/s, Sept. 15-16, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 465 ft³/s at 0600 May 25, gage height, 4.82 ft; minimum daily, 1.2 ft³/s, Sept. 15-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	45	118	204	4.4	14	4.8
2	---	---	---	---	---	---	50	109	140	4.3	16	5.4
3	---	---	---	---	---	---	56	112	134	6.6	18	6.2
4	---	---	---	---	---	---	64	118	148	13	14	15
5	---	---	---	---	---	---	60	128	163	12	12	8.0
6	---	---	---	---	---	---	56	154	151	8.6	8.5	7.0
7	---	---	---	---	---	---	60	225	133	8.0	8.3	5.8
8	---	---	---	---	---	---	66	243	118	12	8.8	4.8
9	---	---	---	---	---	---	64	200	95	33	10	4.0
10	---	---	---	---	---	---	62	171	88	26	12	3.4
11	---	---	---	---	---	---	66	180	81	11	12	3.1
12	---	---	---	---	---	---	67	185	163	9.5	11	2.9
13	---	---	---	---	---	---	64	192	138	9.6	10	1.7
14	---	---	---	---	---	---	78	198	84	14	9.7	1.3
15	---	---	---	---	---	---	100	200	62	12	9.6	1.2
16	---	---	---	---	---	---	125	188	50	15	8.2	1.2
17	---	---	---	---	---	---	120	160	45	9.3	8.3	2.1
18	---	---	---	---	---	---	129	168	36	6.0	10	4.4
19	---	---	---	---	---	---	155	170	29	4.2	11	6.6
20	---	---	---	---	---	---	177	207	32	3.0	8.3	5.2
21	---	---	---	---	---	---	202	239	33	3.9	7.3	4.4
22	---	---	---	---	---	---	256	288	22	2.9	7.0	4.6
23	---	---	---	---	---	---	262	271	16	2.7	6.2	4.7
24	---	---	---	---	---	---	234	340	17	3.2	6.3	3.4
25	---	---	---	---	---	---	226	357	12	4.7	6.3	3.1
26	---	---	---	---	---	---	197	296	6.3	7.6	6.0	3.2
27	---	---	---	---	---	---	160	230	5.6	13	5.3	3.5
28	---	---	---	---	---	---	157	234	5.5	11	4.8	2.9
29	---	---	---	---	---	---	148	247	5.6	11	4.7	3.2
30	---	---	---	---	---	---	134	189	3.9	11	4.7	3.2
31	---	---	---	---	---	---	---	194	---	12	4.6	---
TOTAL	---	---	---	---	---	---	3640	6311	2220.9	304.5	282.9	130.3
MEAN	---	---	---	---	---	---	121	204	74.0	9.82	9.13	4.34
MAX	---	---	---	---	---	---	262	357	204	33	18	15
MIN	---	---	---	---	---	---	45	109	3.9	2.7	4.6	1.2
AC-FT	---	---	---	---	---	---	7220	12520	4410	604	561	258

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1990.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April to September 1990.

WATER TEMPERATURE: April to September 1990.

SUSPENDED-SEDIMENT DISCHARGE: April to September 1990.

INSTRUMENTATION.--Water-quality monitor from April to September 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum mean, 763 microsiemens, July 1; minimum daily, 113 microsiemens, May 25.

WATER TEMPERATURE: Maximum 25.4°C, July 5; minimum, 1.4°C, April 29-30.

SEDIMENT CONCENTRATION: Maximum daily, 476 mg/L, Apr. 20; minimum daily, 13 mg/L, June 22, Sept. 14-15.

SEDIMENT LOADS: Maximum daily, 426 tons, May 25; minimum daily 0.05 tons, Sept. 14-15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR										
17...	1500	106	219	8.3	6.5	80	9.2	95	28	6.1
MAY										
10...	1415	152	196	8.2	5.5	25	9.9	82	23	5.9
JUN										
22...	0955	23	426	8.4	13.5	50	8.8	200	57	13
JUL										
12...	1200	9.1	623	8.2	17.0	3.2	7.8	280	79	21
AUG										
09...	1100	9.1	483	8.4	16.0	10	8.5	210	61	15
SEP										
13...	1530	1.6	428	8.4	18.0	8.1	8.3	190	52	14
27...	1200	2.6	534	8.4	11.5	10	8.0	240	64	19

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
APR										
17...	6.2	12	0.3	1.4	75	36	1.2	<0.1	7.7	136
MAY										
10...	6.5	14	0.3	1.5	64	29	0.4	<0.1	8.2	117
JUN										
22...	13	13	0.4	1.4	151	76	2.8	0.2	10	261
JUL										
12...	28	18	0.7	1.9	224	140	1.3	0.2	10	403
AUG										
09...	17	15	0.5	1.8	168	97	2.3	0.1	4.7	297
SEP										
13...	17	16	0.5	2.1	138	83	3.0	0.5	10	260
27...	23	17	0.6	2.4	154	140	4.5	0.1	5.6	325

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
APR										
17...	132	0.18	38.9	--	--	0.20	--	0.05	--	0.55
MAY										
10...	113	0.16	48.0	52	<0.01	<0.10	<0.10	0.04	0.01	0.46
JUN										
22...	264	0.35	15.9	--	--	<0.10	--	0.13	--	0.77
JUL										
12...	416	0.55	9.88	8	--	<0.10	--	0.01	--	0.79
AUG										
09...	300	0.40	7.31	--	--	<0.10	--	0.06	--	0.64
SEP										
13...	264	0.35	1.11	--	--	<0.10	--	0.02	--	0.58
27...	352	0.44	2.31	13	<0.01	<0.10	<0.10	0.03	<0.01	0.27

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE		NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
APR	17...	--	0.60	--	0.80	0.13	--	0.06	--	--	--
MAY	10...	0.49	0.50	0.50	--	0.06	0.02	0.05	<0.01	7.4	6.6
JUN	22...	--	0.90	--	--	0.02	--	0.02	--	--	--
JUL	12...	--	0.80	--	--	0.05	--	<0.01	--	9.1	8.8
AUG	09...	--	0.70	--	--	0.04	--	<0.01	--	--	--
SEP	13...	--	0.60	--	--	0.02	--	<0.01	--	--	--
	27...	--	0.30	0.50	--	<0.01	<0.01	<0.01	<0.01	5.4	4.9

DATE		TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
APR	17...	1500	--	--	--	--	--	--	--	--	--	--	--
MAY	10...	1415	1300	<1	<1	200	33	<10	20	<1	<1	2	<1
JUN	22...	0955	--	--	--	--	--	--	--	--	--	--	--
JUL	12...	1200	--	--	--	--	--	--	--	--	--	--	--
AUG	09...	1100	--	--	--	--	--	--	--	--	--	--	--
SEP	13...	1530	--	--	--	--	--	--	--	--	--	--	--
	27...	1200	220	<1	<1	<100	79	<10	60	<1	<1	<1	<1

DATE		COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
APR	17...	--	--	--	--	41	--	--	--	--	--	--	--
MAY	10...	1	3	2	2300	46	<10	2	<1	60	12	<0.1	1.2
JUN	22...	--	--	--	--	65	--	--	--	--	--	--	--
JUL	12...	--	--	--	--	76	--	--	--	--	--	--	--
AUG	09...	--	--	--	--	10	--	--	--	--	--	--	--
SEP	13...	--	--	--	--	9	--	--	--	--	--	--	--
	27...	<1	2	1	560	13	20	<1	<1	70	46	<0.1	<0.1

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR 17...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	1	1	3	1	<1	<1	<1	2.0	180	10	10
JUN 22...	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--	--
27...	2	<1	2	2	<1	<1	<1	<1.0	550	10	10

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	TEMPER- ATURE WATER (DEG C)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
APR					
17...	1500	6.5	114	155	48
19...	1620	--	136	243	89
25...	1345	4.0	203	180	99
25...	1355	4.0	203	162	89
26...	1240	5.5	181	140	68
MAY					
07...	1136	6.0	233	256	161
07...	1328	7.0	229	237	147
07...	1700	11.0	216	203	118
07...	1942	10.5	207	206	115
07...	2236	7.0	231	228	142
08...	0148	7.0	280	421	318
08...	0446	7.0	287	440	341
08...	0840	4.5	268	327	237
08...	1055	5.5	258	265	185
10...	1320	--	146	81	32
17...	1445	9.5	150	54	22
24...	1400	10.5	320	365	315
JUN					
06...	1126	15.5	164	76	34
22...	0933	13.0	23	11	0.67
JUL					
12...	1021	17.0	9.6	16	40
AUG					
09...	0953	15.0	9.6	44	1.2
SEP					
13...	1346	17.5	1.6	17	0.07
27...	1006	11.5	2.5	20	0.13

MUDDY CREEK BASIN

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAM- PLING POINTS (COUNT)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	STREAM WIDTH (FT)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM
MAY								
08...	1115	20	242	38.5	1.4	--	2	4
08...	1135	20	237	38.5	4.6	--	1	2
10...	1430	20	150	34.5	3.5	--	1	2
10...	1500	20	157	34.5	2.7	--	1	2
JUN								
06...	1225	20	159	37.0	13	--	1	2
06...	1245	20	155	37.0	9.9	--	1	2

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
MAY								
08...	43	78	94	100	--	--	--	--
08...	21	53	75	85	92	100	--	--
10...	22	53	82	94	99	100	--	--
10...	20	50	72	87	96	100	--	--
JUN								
06...	16	40	58	67	76	81	84	100
06...	22	48	61	69	77	84	84	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAM- PLING POINTS (COUNT)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JUL							
12...	1330	4	10	1	6	13	20
12...	1345	4	10	2	6	11	15
DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JUL							
12...	29	40	51	63	74	82	100
12...	24	35	45	56	68	83	100

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	230	155	763	568	392
2	---	---	---	---	---	---	---	227	182	757	550	396
3	---	---	---	---	---	---	---	218	201	741	531	368
4	---	---	---	---	---	---	---	204	190	654	520	366
5	---	---	---	---	---	---	---	206	178	629	532	369
6	---	---	---	---	---	---	448	199	164	652	527	377
7	---	---	---	---	---	---	435	183	172	677	516	389
8	---	---	---	---	---	---	416	174	176	691	499	389
9	---	---	---	---	---	---	410	178	178	642	471	400
10	---	---	---	---	---	---	411	182	197	564	437	438
11	---	---	---	---	---	---	398	190	230	602	399	415
12	---	---	---	---	---	---	362	209	231	614	358	412
13	---	---	---	---	---	---	346	217	217	600	380	430
14	---	---	---	---	---	---	331	203	231	581	371	487
15	---	---	---	---	---	---	300	195	233	582	364	486
16	---	---	---	---	---	---	256	216	260	569	391	501
17	---	---	---	---	---	---	239	205	281	609	388	501
18	---	---	---	---	---	---	225	173	313	629	383	527
19	---	---	---	---	---	---	215	156	361	651	397	506
20	---	---	---	---	---	---	201	139	376	690	394	447
21	---	---	---	---	---	---	186	130	393	678	397	448
22	---	---	---	---	---	---	176	126	423	683	390	459
23	---	---	---	---	---	---	172	124	465	693	394	473
24	---	---	---	---	---	---	180	120	501	681	401	547
25	---	---	---	---	---	---	208	113	519	650	390	506
26	---	---	---	---	---	---	213	130	583	718	380	525
27	---	---	---	---	---	---	220	153	644	674	381	525
28	---	---	---	---	---	---	234	172	669	599	381	539
29	---	---	---	---	---	---	230	163	707	592	385	528
30	---	---	---	---	---	---	243	172	741	590	387	521
31	---	---	---	---	---	---	---	156	---	584	387	---
MAX	---	---	---	---	---	---	---	230	741	763	568	547
MIN	---	---	---	---	---	---	---	113	155	564	358	366

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	9.4	1.9	11.0	7.0	25.1	13.7	19.8	---	21.0	14.4
2	---	---	10.8	4.4	12.2	4.5	23.9	13.9	18.0	---	22.8	---
3	---	---	11.5	5.3	16.3	7.3	19.7	14.3	20.8	---	22.8	---
4	---	---	9.7	4.1	16.4	8.6	23.0	14.0	20.1	---	23.0	---
5	7.6	---	12.8	5.2	17.4	9.1	25.4	14.0	21.0	---	23.6	16.9
6	8.4	---	13.1	5.7	17.1	10.7	22.7	15.4	22.9	---	22.7	17.5
7	6.8	---	10.4	5.5	16.7	10.4	20.5	13.9	22.6	---	23.2	---
8	7.2	2.1	7.5	4.0	18.8	10.4	19.3	14.5	20.9	---	20.1	---
9	6.8	2.4	8.9	2.0	18.9	10.9	19.0	14.1	21.8	---	21.6	---
10	11.1	2.7	10.5	2.4	15.9	12.4	23.9	13.4	21.5	---	20.9	---
11	10.4	2.9	8.3	5.1	17.0	10.6	24.6	14.1	19.1	---	20.2	---
12	8.4	3.7	8.0	4.1	13.1	11.4	25.2	13.5	17.9	---	20.3	---
13	9.0	3.4	9.8	5.4	18.1	8.9	20.1	13.4	20.0	---	19.7	---
14	10.2	3.6	11.7	4.5	19.5	11.5	21.5	13.1	21.1	---	19.5	---
15	11.3	4.7	8.1	5.5	17.6	10.5	22.1	13.0	18.6	---	19.6	---
16	8.2	3.1	9.4	4.0	15.7	10.7	20.7	14.0	20.0	---	16.6	---
17	7.7	3.6	11.2	4.3	19.5	8.7	25.0	11.8	18.2	17.2	16.2	---
18	9.2	3.6	10.4	6.1	19.9	10.7	21.1	13.6	20.0	---	17.4	---
19	9.2	4.2	10.2	4.6	17.3	11.3	24.5	13.6	19.8	---	15.0	---
20	10.2	4.0	8.7	4.2	20.2	9.7	19.6	14.8	19.7	---	14.2	---
21	8.4	3.9	10.3	3.9	20.9	11.7	21.8	13.2	22.8	15.7	17.2	---
22	7.6	3.3	9.9	4.1	21.9	11.6	22.8	11.8	20.0	---	17.9	---
23	7.2	3.7	11.4	4.6	22.0	12.1	19.4	11.6	18.7	---	17.6	---
24	6.2	3.5	11.6	5.1	22.7	13.1	21.4	12.0	20.2	---	17.0	---
25	7.4	3.3	11.0	3.5	21.0	14.2	20.2	13.5	20.1	---	18.5	---
26	5.7	2.7	9.4	4.6	23.5	14.2	20.3	12.4	20.6	---	17.6	---
27	6.8	2.0	12.3	5.2	23.4	13.5	21.2	12.8	21.7	---	16.0	---
28	6.4	3.5	12.9	6.3	25.1	13.2	18.4	12.7	21.4	---	16.3	---
29	5.7	1.4	9.5	6.7	24.5	12.7	20.2	13.0	22.6	---	17.3	---
30	7.2	1.4	11.6	5.1	25.3	13.1	21.3	12.9	20.2	---	17.3	---
31	---	---	13.1	5.9	---	---	20.4	12.9	17.6	---	---	---
MONTH	---	---	13.1	1.9	25.3	4.5	25.4	11.6	22.9	---	23.6	---

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) APRIL	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MAY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JUNE	SEDIMENT DISCHARGE (TONS/DAY)
1	45	---	---	118	96	31	204	135	74
2	50	---	---	109	92	27	140	110	42
3	56	---	---	112	80	24	134	145	52
4	64	---	---	118	88	28	148	150	60
5	60	---	---	128	98	34	163	70	31
6	56	---	---	154	120	50	151	67	27
7	60	---	---	225	278	169	133	57	20
8	66	---	---	243	292	200	118	52	17
9	64	---	---	200	152	82	95	46	12
10	62	---	---	171	85	39	88	48	11
11	66	---	---	180	98	48	81	57	12
12	67	---	---	185	70	35	163	84	39
13	64	---	---	192	65	34	138	64	24
14	78	---	---	198	82	44	84	28	6.4
15	100	---	---	200	80	43	62	21	3.5
16	125	---	---	188	60	30	50	20	2.7
17	120	---	---	160	58	25	45	20	2.4
18	129	197	69	168	74	34	36	19	1.8
19	155	298	125	170	77	35	29	22	1.7
20	177	476	227	207	202	113	32	21	1.8
21	202	380	207	239	192	126	33	18	1.6
22	256	412	285	288	383	308	22	13	.77
23	262	408	289	271	448	328	16	15	.65
24	234	235	148	340	447	410	17	28	1.3
25	226	195	119	357	411	426	12	33	1.1
26	197	148	79	296	302	252	6.3	29	.49
27	160	102	44	230	170	106	5.6	28	.42
28	157	104	44	234	145	92	5.5	29	.43
29	148	105	42	247	135	90	5.6	31	.47
30	134	97	35	189	90	46	3.9	22	.23
31	---	---	---	194	120	63	---	---	---
TOTAL	3640	---	---	6311	---	3372	2220.9	---	448.76

MUDDY CREEK BASIN

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	4.4	17	.20	14	---	---	4.8	33	.43
2	4.3	18	.21	16	---	---	5.4	40	.58
3	6.6	25	.45	18	---	---	6.2	47	.79
4	13	39	1.4	14	---	---	15	---	---
5	12	42	1.4	12	---	---	8.0	---	---
6	8.6	41	.95	8.5	45	1.0	7.0	---	---
7	8.0	42	.91	8.3	44	.99	5.8	---	---
8	12	60	2.2	8.8	44	1.0	4.8	---	---
9	33	115	10	10	45	1.2	4.0	---	---
10	26	65	4.6	12	53	1.7	3.4	38	.35
11	11	29	.86	12	60	1.9	3.1	32	.27
12	9.5	18	.46	11	55	1.6	2.9	23	.18
13	9.6	18	.47	10	53	1.4	1.7	17	.08
14	14	23	.87	9.7	53	1.4	1.3	15	.05
15	12	21	.68	9.6	52	1.3	1.2	15	.05
16	15	28	1.1	8.2	51	1.1	1.2	19	.06
17	9.3	37	.93	8.3	51	1.1	2.1	35	.20
18	6.0	33	.53	10	53	1.4	4.4	53	.63
19	4.2	33	.37	11	58	1.7	6.6	57	1.0
20	3.0	36	.29	8.3	56	1.3	5.2	53	.74
21	3.9	43	.45	7.3	52	1.0	4.4	49	.58
22	2.9	---	---	7.0	49	.93	4.6	52	.65
23	2.7	---	---	6.2	45	.75	4.7	57	.72
24	3.2	---	---	6.3	44	.75	3.4	50	.46
25	4.7	---	---	6.3	41	.70	3.1	48	.40
26	7.6	---	---	6.0	38	.62	3.2	47	.41
27	13	---	---	5.3	33	.47	3.5	55	.52
28	11	---	---	4.8	32	.42	2.9	57	.45
29	11	---	---	4.7	32	.41	3.2	57	.49
30	11	---	---	4.7	32	.41	3.2	56	.48
31	12	---	---	4.6	32	.40	---	---	---
TOTAL	304.5	---	---	282.9	---	---	130.3	---	---

09041500 MUDDY CREEK AT KREMMLING, CO

LOCATION.--Lat 40°03'43", long 106°23'43", in NW¼SE¼ sec. 7, T.1 N., R.80 W., Grand County, Hydrologic Unit 14010001, on left bank 900 ft upstream from U.S. Highway 40 bridge at Kremmling and 3.0 mi upstream from mouth.

DRAINAGE AREA.--290 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August to October 1904, April to October 1905. Monthly discharge only in WSP 1313. April 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,340 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 23, 1989, at site 450 ft downstream at same datum. Supplementary recorder on diversion ditch about 2,000 ft downstream from point of diversion.

REMARKS.--Estimated daily discharges: Dec. 6 to Mar. 27, May 3-8, and Aug. 12-31. Records good except for estimated daily discharges, which are poor. Records include flow of diversion ditch.

AVERAGE DISCHARGE.--8 years, 108 ft³/s; 78,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum combined discharge, 1,670 ft³/s, May 16, 1984, gage height, 12.67 ft; minimum daily, 1.0 ft³/s, Sept. 24, 25, 1905.

EXTREMES FOR CURRENT YEAR.--Maximum combined discharge, 394 ft³/s at 1600 May 25, gage height, 6.06 ft; minimum daily, 2.7 ft³/s, Sept. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	9.8	11	9.4	9.0	14	48	138	260	46	23	4.3
2	6.9	9.0	11	9.4	9.0	15	48	125	212	48	28	5.1
3	6.6	9.0	10	9.4	9.0	16	55	116	189	51	27	5.2
4	6.4	13	9.8	9.4	9.0	16	62	132	190	65	27	31
5	5.8	14	10	9.4	9.0	17	66	138	201	77	23	13
6	6.2	13	9.6	9.2	9.0	18	63	153	202	64	18	12
7	6.5	14	9.6	9.2	9.0	17	62	197	197	63	15	7.8
8	6.3	13	9.6	9.2	9.6	16	68	237	172	72	13	6.6
9	6.2	16	9.6	9.2	10	17	74	217	155	113	14	5.8
10	6.3	18	9.6	9.2	10	18	69	194	142	110	14	5.3
11	6.2	18	9.6	9.2	10	19	67	200	146	77	16	4.8
12	6.4	15	9.6	9.2	10	20	74	203	158	59	16	4.8
13	6.1	16	9.6	9.2	11	19	75	201	239	54	16	4.5
14	6.0	16	9.6	9.2	11	18	70	196	162	62	17	3.6
15	6.6	11	9.6	9.2	11	18	84	207	125	83	15	3.2
16	12	9.9	9.6	9.0	11	17	120	216	109	78	11	2.7
17	9.9	17	9.6	9.0	11	17	125	183	98	99	11	4.9
18	9.0	15	9.6	9.0	11	17	123	176	98	72	12	8.8
19	8.4	19	9.6	9.0	11	17	142	180	81	49	13	9.8
20	8.3	15	9.6	9.0	11	18	166	197	75	48	14	12
21	8.3	13	9.6	9.0	11	20	185	226	80	56	11	7.5
22	8.4	13	9.6	9.0	11	23	220	257	81	41	9.5	6.0
23	7.7	11	9.6	9.0	11	27	243	271	70	35	8.6	5.2
24	6.7	13	9.6	9.0	11	31	231	297	72	33	8.1	4.8
25	7.8	18	9.6	9.0	11	37	240	336	78	41	7.2	5.0
26	8.3	14	9.4	9.0	12	43	216	307	74	40	6.4	4.7
27	8.8	14	9.4	9.0	13	48	182	263	69	35	5.4	4.2
28	9.2	11	9.4	9.0	14	47	169	258	66	30	5.0	4.2
29	9.4	10	9.4	9.0	---	48	165	280	50	28	4.7	4.6
30	9.2	9.9	9.4	9.0	---	48	154	278	46	28	4.8	4.5
31	9.2	---	9.4	9.0	---	48	---	243	---	24	8.5	---
TOTAL	235.7	407.6	300.2	283.0	294.6	764	3666	6622	3897	1781	422.2	205.9
MEAN	7.60	13.6	9.68	9.13	10.5	24.6	122	214	130	57.5	13.6	6.86
MAX	12	19	11	9.4	14	48	243	336	260	113	28	31
MIN	5.8	9.0	9.4	9.0	9.0	14	48	116	46	24	4.7	2.7
AC-FT	468	808	595	561	584	1520	7270	13130	7730	3530	837	408

CAL YR 1989 TOTAL 24790.5 MEAN 67.9 MAX 484 MIN 5.1 AC-FT 49170
WTR YR 1990 TOTAL 18879.2 MEAN 51.7 MAX 336 MIN 2.7 AC-FT 37450

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1986 to September 1987, April to September 1990.

WATER TEMPERATURE: April 1986 to September 1987, April to September 1990.

INSTRUMENTATION.--Water-quality monitor from April 1986 to September 1987, April to September 1990.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum mean, 2,820 microsiemens, Sept. 8, 1990; minimum mean, 212 microsiemens, May 22, 1986.

WATER TEMPERATURE: Maximum, 25.9°C, July 1-2, 1990; minimum, 0.0°C, on many days during winter.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum mean, 2,820 microsiemens, Sept. 8; minimum mean, 263 microsiemens, May 26.

WATER TEMPERATURE: Maximum, 25.9°C, July 1-2; minimum, 1.7°C, April 27.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
OCT										
19...	1715	8.4	1350	8.6	8.5	20	10.2	600	140	61
NOV										
07...	1700	14	1480	8.2	3.0	15	11.3	750	180	72
DEC										
12...	1510	9.5	955	8.2	0.5	14	12.3	440	110	41
JAN										
30...	1320	8.9	657	7.9	0.0	1.5	10.6	300	81	23
FEB										
27...	1625	13	705	7.9	0.5	27	12.2	300	75	28
MAR										
27...	1230	49	911	8.3	2.5	43	10.6	370	79	43
APR										
19...	1115	147	335	8.2	7.5	140	8.6	140	39	11
MAY										
09...	1710	195	291	8.1	7.0	82	9.3	120	34	9.0
JUN										
21...	1110	71	926	8.4	17.0	24	7.4	460	120	38
JUL										
11...	1400	78	1100	8.4	20.0	25	6.8	530	130	50
AUG										
08...	1230	13	1200	8.3	19.0	12	7.8	580	140	55
SEP										
11...	1415	4.5	1640	8.5	17.5	12	9.0	720	150	85
25...	1230	5.0	1730	8.4	12.5	46	7.3	790	150	100

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT										
19...	74	21	1	3.8	178	610	6.9	0.4	5.2	1050
NOV										
07...	73	17	1	4.1	200	680	6.0	0.3	7.7	1170
DEC										
12...	45	18	0.9	2.6	199	330	4.4	0.3	11	677
JAN										
30...	28	17	0.7	2.2	160	190	3.1	0.2	11	454
FEB										
27...	36	20	0.9	3.6	152	230	4.5	0.2	11	482
MAR										
27...	56	24	1	3.9	128	370	4.9	<0.1	6.3	676
APR										
19...	12	15	0.4	1.4	86	74	1.7	<0.1	7.7	204
MAY										
09...	8.8	13	0.3	1.7	70	70	1.0	0.2	8.5	177
JUN										
21...	28	12	0.6	2.6	167	360	3.9	0.3	11	684
JUL										
11...	45	15	0.9	3.1	218	400	3.9	0.3	11	764
AUG										
08...	49	16	0.9	3.1	200	450	4.5	0.2	5.9	910
SEP										
11...	100	23	2	5.7	162	750	9.2	1.0	4.3	1330
25...	120	25	2	4.4	188	640	14	<0.1	4.4	1360
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
19...	1010	1.43	23.7	--	--	<0.10	--	0.05	--	0.35
NOV										
07...	1140	1.59	44.2	--	--	<0.10	--	0.03	--	0.27
DEC										
12...	664	0.92	17.4	14	--	<0.10	--	0.02	--	0.48
JAN										
30...	434	0.62	10.9	--	--	0.10	--	0.03	--	0.27
FEB										
27...	479	0.66	16.7	--	--	0.20	--	0.05	--	0.45
MAR										
27...	640	0.92	89.8	--	--	0.20	--	0.10	--	0.60
APR										
19...	198	0.28	81.0	--	--	0.10	--	0.11	--	0.69
MAY										
09...	176	0.24	93.2	194	<0.01	<0.10	<0.10	0.03	0.01	0.67
JUN										
21...	664	0.93	131	--	--	<0.10	--	0.14	--	0.66
JUL										
11...	774	1.04	160	80	--	<0.10	--	0.02	--	0.88
AUG										
08...	828	1.24	33.2	--	--	<0.10	--	0.06	--	0.54
SEP										
11...	1200	1.81	16.3	--	--	<0.10	--	0.01	--	0.59
25...	1150	1.85	18.4	57	<0.01	0.20	<0.10	0.05	0.03	0.55

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

		NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	
	DATE											
	OCT 19...	--	0.40	--	--	0.06	--	0.03	--	--	--	
	NOV 07...	--	0.30	--	--	0.04	--	0.01	--	--	--	
	DEC 12...	--	0.50	--	--	0.03	--	0.04	--	3.8	4.2	
	JAN 30...	--	0.30	--	0.40	0.04	--	0.01	--	--	--	
	FEB 27...	--	0.50	--	0.70	0.04	--	0.02	--	--	--	
	MAR 27...	--	0.70	--	0.90	0.08	--	0.09	--	--	--	
	APR 19...	--	0.80	--	0.90	0.25	--	0.13	--	--	--	
	MAY 09...	0.49	0.70	0.50	--	0.09	0.02	0.04	<0.01	9.6	6.7	
	JUN 21...	--	0.80	--	--	0.05	--	0.03	--	--	--	
	JUL 11...	--	0.90	--	--	0.10	--	0.02	--	11	9.6	
	AUG 08...	--	0.60	--	--	0.08	--	0.01	--	--	--	
	SEP 11...	--	0.60	--	--	0.02	--	<0.01	--	--	--	
	25...	0.47	0.60	0.50	0.80	<0.01	<0.01	<0.01	<0.01	7.9	7.1	
DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
	OCT 19...	1715	--	--	--	--	--	--	--	--	--	--
	NOV 07...	1700	--	--	--	--	--	--	--	--	--	--
	DEC 12...	1510	--	--	--	--	--	--	--	--	--	--
	JAN 30...	1320	--	--	--	--	--	--	--	--	--	--
	FEB 27...	1625	--	--	--	--	--	--	--	--	--	--
	MAR 27...	1230	--	--	--	--	--	--	--	--	--	--
	APR 19...	1115	--	--	--	--	--	--	--	--	--	--
	MAY 09...	1710	4100	1	<1	<100	30	<10	20	<1	2	5
	JUN 21...	1110	--	--	--	--	--	--	--	--	--	--
	JUL 11...	1400	--	--	--	--	--	--	--	--	--	--
	AUG 08...	1230	--	--	--	--	--	--	--	--	--	--
	SEP 11...	1415	--	--	--	--	--	--	--	--	--	--
	25...	1230	1100	2	<1	200	110	<10	180	<1	<1	1

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
OCT 19...	--	--	--	--	10	--	--	--	--	--	--	--
NOV 07...	--	--	--	--	11	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	7	--	--	--	--	--	--	--
JAN 30...	--	--	--	--	9	--	--	--	--	--	--	--
FEB 27...	--	--	--	--	21	--	--	--	--	--	--	--
MAR 27...	--	--	--	--	25	--	--	--	--	--	--	--
APR 19...	--	--	--	--	39	--	--	--	--	--	--	--
MAY 09...	2	5	1	580	41	10	5	<1	120	15	<0.1	<0.10
JUN 21...	--	--	--	--	17	--	--	--	--	--	--	--
JUL 11...	--	--	--	--	8	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	3	--	--	--	--	--	--	--
SEP 11...	--	--	--	--	7	--	--	--	--	--	--	--
25...	1	2	1	1500	7	110	1	<1	210	160	<0.1	<0.10

DATE	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 19...	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	--	--	--	--	--	--	--	--	--	--	--
MAR 27...	--	--	--	--	--	--	--	--	--	--	--
APR 19...	--	--	--	--	--	--	--	--	--	--	--
MAY 09...	2	1	8	1	2	2	<1	2.0	280	40	<3
JUN 21...	--	--	--	--	--	--	--	--	--	--	--
JUL 11...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--
SEP 11...	--	--	--	--	--	--	--	--	--	--	--
25...	3	3	5	3	3	4	<1	1.0	1500	20	8

MUDDY CREEK BASIN

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	454	---	1180	1290	1210
2	---	---	---	---	---	---	---	455	---	1210	1280	1200
3	---	---	---	---	---	---	---	465	---	1270	1240	1200
4	---	---	---	---	---	---	---	439	---	1250	1220	1210
5	---	---	---	---	---	---	---	411	---	1180	1170	947
6	---	---	---	---	---	---	---	412	---	1110	1130	1460
7	---	---	---	---	---	---	---	675	355	542	1170	1580
8	---	---	---	---	---	---	---	661	295	480	1190	2820
9	---	---	---	---	---	---	---	607	303	528	1270	2280
10	---	---	---	---	---	---	---	612	339	579	1260	1960
11	---	---	---	---	---	---	---	702	356	635	1100	1670
12	---	---	---	---	---	---	---	605	350	677	1120	1570
13	---	---	---	---	---	---	---	546	404	546	1140	1490
14	---	---	---	---	---	---	---	536	405	617	1160	1420
15	---	---	---	---	---	---	---	515	391	673	1160	1370
16	---	---	---	---	---	---	---	424	447	721	1150	1350
17	---	---	---	---	---	---	---	361	442	763	1140	1350
18	---	---	---	---	---	---	---	360	427	798	1180	1330
19	---	---	---	---	---	---	---	344	375	830	1130	1290
20	---	---	---	---	---	---	---	345	362	890	1200	1230
21	---	---	---	---	---	---	---	312	329	900	1200	1180
22	---	---	---	---	---	---	---	289	311	912	1360	1200
23	---	---	---	---	---	---	---	280	---	935	1380	1340
24	---	---	---	---	---	---	---	301	---	980	1360	1810
25	---	---	---	---	---	---	---	346	---	1010	1310	1740
26	---	---	---	---	---	---	---	405	263	998	1260	1500
27	---	---	---	---	---	---	---	391	277	1070	1400	1360
28	---	---	---	---	---	---	---	407	352	1070	1430	1310
29	---	---	---	---	---	---	---	424	386	1090	1320	1300
30	---	---	---	---	---	---	---	430	454	1150	1320	1310
31	---	---	---	---	---	---	---	---	---	---	1300	---
TOTAL	---	---	---	---	---	---	---	---	---	38210	36260	43987
MEAN	---	---	---	---	---	---	---	---	---	1230	1170	1470
MAX	---	---	---	---	---	---	---	---	---	1430	1290	2820
MIN	---	---	---	---	---	---	---	---	---	1100	1060	947

09041500 MUDDY CREEK AT KREMMLING, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	9.7	3.2	11.7	---	25.9	---	18.8	17.4	---	---
2	---	---	12.4	---	9.9	7.6	25.9	15.3	17.8	16.4	---	---
3	---	---	10.7	4.8	14.7	8.6	---	---	17.3	15.5	---	---
4	---	---	---	---	16.2	12.0	---	---	18.7	16.7	---	---
5	---	---	---	---	16.5	12.7	---	---	19.2	16.8	---	---
6	---	---	13.9	---	17.5	12.5	---	---	20.0	17.7	---	---
7	7.1	5.7	13.5	8.4	17.5	14.0	---	---	19.7	17.0	---	---
8	6.9	5.8	10.8	6.7	18.1	14.5	---	---	19.2	16.6	---	---
9	6.4	5.5	7.9	3.8	18.4	15.5	19.6	16.9	19.3	15.3	---	---
10	8.3	5.0	10.1	4.4	18.3	16.3	---	15.9	19.1	16.7	---	---
11	9.5	6.8	---	---	17.3	14.0	20.3	18.6	18.8	16.8	18.4	13.8
12	9.7	7.8	---	---	16.0	13.5	20.8	20.1	19.8	16.5	18.8	13.6
13	9.0	7.1	---	---	16.7	11.0	20.6	18.2	20.2	13.8	18.7	14.2
14	9.0	6.2	---	---	18.3	14.0	18.2	16.9	---	---	18.9	14.0
15	11.6	7.8	---	---	18.4	15.2	19.5	17.6	---	---	19.2	13.7
16	11.6	8.5	---	---	18.2	14.9	19.4	17.7	---	---	16.6	15.0
17	10.1	6.0	12.3	6.8	17.1	13.3	19.2	14.5	---	---	15.6	14.2
18	10.9	6.0	12.6	9.0	18.5	15.2	19.3	18.2	---	---	14.8	13.2
19	10.4	7.3	11.4	7.8	18.5	15.8	19.7	17.8	---	---	15.4	13.1
20	11.9	6.3	10.3	7.1	17.4	11.2	19.7	19.1	---	---	14.0	12.5
21	10.8	7.0	11.2	6.9	18.8	14.4	18.8	15.9	---	---	14.6	11.8
22	10.8	5.6	12.5	---	19.5	15.2	18.5	16.2	---	---	16.0	11.0
23	---	---	12.8	6.6	19.5	16.3	18.3	17.3	---	11.8	16.4	11.6
24	---	5.4	12.5	9.6	20.6	18.1	18.1	16.6	---	---	15.9	12.0
25	---	3.3	10.9	---	20.9	16.2	19.0	17.1	---	---	17.2	11.0
26	---	---	10.7	8.5	19.4	17.7	20.0	18.2	---	13.2	16.2	13.3
27	5.7	1.7	11.9	6.4	20.1	15.5	19.8	18.8	---	13.1	16.2	13.0
28	---	---	13.0	8.0	20.4	13.1	19.4	18.0	---	13.4	15.8	12.5
29	5.5	2.9	12.1	8.0	21.2	18.2	19.2	17.6	23.1	13.2	16.0	12.5
30	5.8	2.2	---	---	25.2	17.4	19.6	17.0	---	13.7	16.1	11.8
31	---	---	---	---	---	---	19.5	17.6	---	13.5	---	---
MONTH	---	---	---	---	25.2	---	---	---	---	---	---	---

09041900 MONTE CRISTO DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'51", long 106°04'15", in NE¼SE¼ sec.2, T.8 S., R.78W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 1,800 ft downstream from diversion point, 1.4 mi northwest of Hoosier Pass, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year (seasonal record).

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 10,986 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 1 to May 9, July 28 to Aug. 3 and Sept. 2-30. Records good. This is a transmountain diversion from Monte Cristo Creek in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion point is in SW¼NE¼ sec.2, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 72 ft³/s, July 25, 1989; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.00	.00	7.9	8.5	.00	10
2	---	---	---	---	---	---	.00	.00	5.5	25	.00	5.5
3	---	---	---	---	---	---	.00	.00	6.0	25	15	.00
4	---	---	---	---	---	---	.00	.00	10	26	45	.00
5	---	---	---	---	---	---	.00	.00	12	27	44	.00
6	---	---	---	---	---	---	.00	.00	12	29	44	.00
7	---	---	---	---	---	---	.00	.00	12	24	44	.00
8	---	---	---	---	---	---	.00	.00	11	21	46	.00
9	---	---	---	---	---	---	.00	1.2	10	26	46	.00
10	---	---	---	---	---	---	.00	3.2	12	21	45	.00
11	---	---	---	---	---	---	.00	3.6	11	17	44	.00
12	---	---	---	---	---	---	.00	2.7	9.3	15	44	.00
13	---	---	---	---	---	---	.00	3.0	7.0	14	43	.00
14	---	---	---	---	---	---	.00	3.6	6.9	13	44	.00
15	---	---	---	---	---	---	.00	3.3	6.3	12	59	.00
16	---	---	---	---	---	---	.00	2.9	5.4	11	57	.00
17	---	---	---	---	---	---	.00	2.6	4.6	10	56	.00
18	---	---	---	---	---	---	.00	3.3	4.5	10	55	.00
19	---	---	---	---	---	---	.00	3.9	4.7	13	53	.00
20	---	---	---	---	---	---	.00	4.6	4.4	12	52	.00
21	---	---	---	---	---	---	.00	6.1	4.3	15	50	.00
22	---	---	---	---	---	---	.00	8.2	4.0	14	46	.00
23	---	---	---	---	---	---	.00	11	4.0	12	36	.00
24	---	---	---	---	---	---	.00	11	4.0	9.2	34	.00
25	---	---	---	---	---	---	.00	9.1	3.9	10	30	.00
26	---	---	---	---	---	---	.00	8.0	3.8	11	24	.00
27	---	---	---	---	---	---	.00	7.1	3.5	9.1	6.8	.00
28	---	---	---	---	---	---	.00	10	3.3	3.6	5.8	.00
29	---	---	---	---	---	---	.00	11	3.1	.00	12	.00
30	---	---	---	---	---	---	.00	6.5	2.9	.00	12	.00
31	---	---	---	---	---	---	---	8.4	---	.00	11	---
TOTAL	---	---	---	---	---	---	0.00	134.30	199.3	443.40	1103.60	15.50
MEAN	---	---	---	---	---	---	.000	4.33	6.64	14.3	35.6	.52
MAX	---	---	---	---	---	---	.00	11	12	29	59	10
MIN	---	---	---	---	---	---	.00	.00	2.9	.00	.00	.00
AC-FT	---	---	---	---	---	---	.00	266	395	879	2190	31

09044300 BEMROSE-HOOSIER DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'50", long 106°04'13", in NE¼SE¼ sec.2, T.8 S., R.78W., Summit County, Hydrologic Unit 14010002, on right bank at entrance to Hoosier Pass tunnel, 1.4 mi northwest of Hoosier Pass, 1.6 mi downstream from diversion point on Bemrose Creek, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year (seasonal record).

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 10,986 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 1 to May 10, July 29-31, Aug. 10 to Sept. 30. Records good except for estimated daily discharges, Apr. 18 to May 10, which are poor. This is a transmountain diversion from Bemrose and Hoosier Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in SW¼SW¼ sec.6, T.8 S., R.77 W., and in sec.12, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with City of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 44 ft³/s, June 21, 1965; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.00	.00	7.5	5.9	1.7	.00
2	---	---	---	---	---	---	.00	.00	6.7	5.7	1.6	.00
3	---	---	---	---	---	---	.00	.00	8.1	5.6	1.8	.00
4	---	---	---	---	---	---	.00	.00	17	5.6	1.7	.00
5	---	---	---	---	---	---	.00	.00	22	5.4	1.7	.00
6	---	---	---	---	---	---	.00	.02	24	5.3	1.6	.00
7	---	---	---	---	---	---	.00	.05	25	5.0	1.5	.00
8	---	---	---	---	---	---	.00	.00	26	5.4	1.5	.00
9	---	---	---	---	---	---	.00	.00	24	5.0	1.4	.00
10	---	---	---	---	---	---	.00	.60	27	4.5	.38	.00
11	---	---	---	---	---	---	.00	1.4	25	4.3	.00	.00
12	---	---	---	---	---	---	.00	1.2	22	4.0	.00	.00
13	---	---	---	---	---	---	.00	1.5	20	3.8	.00	.00
14	---	---	---	---	---	---	.00	1.7	19	3.9	.00	.00
15	---	---	---	---	---	---	.00	1.5	17	3.7	.00	.00
16	---	---	---	---	---	---	.00	1.3	15	3.3	.00	.00
17	---	---	---	---	---	---	.00	1.3	13	3.3	.00	.00
18	---	---	---	---	---	---	.06	1.7	12	3.4	.00	.00
19	---	---	---	---	---	---	.18	2.0	12	3.3	.00	.00
20	---	---	---	---	---	---	.00	2.4	11	3.3	.00	.00
21	---	---	---	---	---	---	.00	3.5	10	3.5	.00	.00
22	---	---	---	---	---	---	.00	4.7	9.5	3.3	.00	.00
23	---	---	---	---	---	---	.10	5.9	9.2	3.0	.00	.00
24	---	---	---	---	---	---	.00	6.5	8.7	2.9	.00	.00
25	---	---	---	---	---	---	.00	6.4	8.3	2.8	.00	.00
26	---	---	---	---	---	---	.00	6.1	7.9	2.6	.00	.00
27	---	---	---	---	---	---	.00	6.5	7.6	2.5	.00	.00
28	---	---	---	---	---	---	.00	8.5	7.2	1.8	.00	.00
29	---	---	---	---	---	---	.00	8.8	6.7	.34	.00	.00
30	---	---	---	---	---	---	.00	6.9	6.2	.00	.00	.00
31	---	---	---	---	---	---	---	7.6	---	.50	.00	---
TOTAL	---	---	---	---	---	---	0.34	88.07	434.6	112.94	14.88	0.00
MEAN	---	---	---	---	---	---	.011	2.84	14.5	3.64	.48	.000
MAX	---	---	---	---	---	---	.18	8.8	27	5.9	1.8	.00
MIN	---	---	---	---	---	---	.00	.00	6.2	.00	.00	.00
AC-FT	---	---	---	---	---	---	.7	175	862	224	30	.00

09044800 MCCULLOUGH-SPRUCE-CRYSTAL DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'51", long 106°04'14", in NE¼SE¼ sec.2, T.8 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 1.4 mi northwest of Hoosier Pass, 1.6 mi downstream from diversion point on McCullough Gulch, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year (seasonal record). Prior to October 1961, Published as McCullough diversion near Hoosier Pass.

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 10,986 ft, above National Geodetic Vertical datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 1 to May 10, and July 28 to Sept. 30. Records good. This is a transmountain diversion from McCullough Gulch and Spruce and Crystal Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in secs.14, 23, and 26, T.7 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 123 ft³/s, June 20, 1968, June 19, 1983; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.00	.00	32	51	.00	.00
2	---	---	---	---	---	---	.00	.00	25	50	.00	.00
3	---	---	---	---	---	---	.00	.00	29	46	.00	.00
4	---	---	---	---	---	---	.00	.00	54	51	.00	.00
5	---	---	---	---	---	---	.00	.00	89	48	.00	.00
6	---	---	---	---	---	---	.00	.00	95	54	.00	.00
7	---	---	---	---	---	---	.00	.00	92	50	.00	.00
8	---	---	---	---	---	---	.00	.00	98	43	.00	.00
9	---	---	---	---	---	---	.00	.00	103	47	.00	.00
10	---	---	---	---	---	---	.00	.56	122	39	.00	.00
11	---	---	---	---	---	---	.00	1.9	103	35	.00	.00
12	---	---	---	---	---	---	.00	.90	75	30	.00	.00
13	---	---	---	---	---	---	.00	.71	58	27	.00	.00
14	---	---	---	---	---	---	.00	.93	69	28	.00	.00
15	---	---	---	---	---	---	.00	1.2	68	24	.00	.00
16	---	---	---	---	---	---	.00	1.3	55	24	.00	.00
17	---	---	---	---	---	---	.00	1.3	48	28	.00	.00
18	---	---	---	---	---	---	.00	2.1	58	25	.00	.00
19	---	---	---	---	---	---	.00	3.1	63	26	.00	.00
20	---	---	---	---	---	---	.00	4.5	63	25	.00	.00
21	---	---	---	---	---	---	.00	7.3	65	31	.00	.00
22	---	---	---	---	---	---	.00	12	63	28	.00	.00
23	---	---	---	---	---	---	.00	19	67	22	.00	.00
24	---	---	---	---	---	---	.00	25	67	20	.00	.00
25	---	---	---	---	---	---	.00	24	64	20	.00	.00
26	---	---	---	---	---	---	.00	25	62	21	.00	.00
27	---	---	---	---	---	---	.00	30	61	20	.00	.00
28	---	---	---	---	---	---	.00	38	61	8.9	.00	.00
29	---	---	---	---	---	---	.00	38	58	.20	.00	.00
30	---	---	---	---	---	---	.00	23	56	.00	.00	.00
31	---	---	---	---	---	---	---	30	---	.00	.00	---
TOTAL	---	---	---	---	---	---	0.00	289.80	2023	922.10	0.00	0.00
MEAN	---	---	---	---	---	---	.000	9.35	67.4	29.7	.000	.000
MAX	---	---	---	---	---	---	.00	38	122	54	.00	.00
MIN	---	---	---	---	---	---	.00	.00	25	.00	.00	.00
AC-FT	---	---	---	---	---	---	.00	575	4010	1830	.00	.00

09046490 BLUE RIVER AT BLUE RIVER, CO

LOCATION.--Lat 39°27'21", long 106°01'52", in NE¼SE¼ sec.7, T.7 S, R.77 W., Summit County, Hydrologic Unit 14010002 on left bank, 350 ft downstream from spillway of Goose Pasture Tarn Dam, 2.0 mi southeast of Breckenridge.

DRAINAGE AREA.--22.6 mi².

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 9,385 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Transmountain diversions upstream from station by Boreas Pass ditch and Hoosier Pass tunnel. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--7 years, 34.8 ft³/s; 25,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 506 ft³/s July 1, 1984, gage height, 2.84 ft; minimum daily, 3.6 ft³/s, Feb. 27, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 131 ft³/s, at 2300 June 8, gage height, 1.89 ft; minimum daily, 3.6 ft³/s, Feb. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	12	9.6	6.5	6.4	4.8	5.0	12	72	31	28	24
2	14	11	9.0	6.9	6.1	4.7	5.0	12	67	29	29	30
3	15	11	9.1	6.9	5.8	4.6	5.5	12	65	30	29	30
4	15	11	9.0	6.8	5.7	4.7	6.0	12	78	31	27	34
5	15	11	9.1	7.3	5.7	4.8	6.7	13	98	29	26	36
6	14	11	9.4	7.0	5.7	6.1	6.8	14	108	30	25	35
7	14	11	9.5	6.9	5.7	5.5	6.2	20	112	30	23	33
8	15	11	8.8	7.2	5.6	4.9	6.5	26	118	32	22	31
9	15	11	8.9	7.7	5.4	4.6	6.9	24	115	31	22	30
10	14	11	9.6	7.3	5.3	4.6	6.8	21	118	28	21	29
11	14	11	8.8	7.1	5.3	4.6	7.1	24	112	26	22	27
12	14	11	8.3	7.0	5.4	4.8	7.5	20	107	24	23	26
13	13	11	8.6	7.0	5.6	5.6	8.2	20	95	23	27	24
14	13	11	8.7	7.2	5.4	5.1	7.9	23	89	25	25	22
15	14	10	9.1	6.9	5.9	4.7	9.6	24	83	25	25	21
16	15	9.7	9.2	7.0	5.4	4.7	12	24	75	24	34	20
17	15	10	8.7	6.7	5.0	4.5	13	21	68	25	30	22
18	14	9.6	9.4	6.8	4.9	4.8	13	23	63	22	31	23
19	13	9.8	8.4	7.1	4.7	4.6	15	24	60	21	33	29
20	13	10	8.0	6.9	4.8	4.6	14	27	56	20	29	27
21	14	9.9	7.9	6.4	4.9	4.7	16	29	53	24	29	26
22	14	9.9	8.1	6.6	5.0	4.8	20	35	49	23	29	25
23	14	9.6	7.8	6.4	4.8	5.0	23	49	46	20	29	23
24	13	9.4	7.4	6.9	4.6	5.1	24	57	43	19	27	22
25	13	9.9	7.2	6.4	4.5	5.1	20	61	41	19	24	22
26	13	10	7.3	6.4	4.3	5.3	17	62	40	17	25	30
27	12	11	7.1	6.4	3.6	5.6	15	61	37	15	25	28
28	12	10	6.9	6.1	4.7	6.3	15	69	35	15	23	30
29	12	9.5	6.8	7.1	---	6.1	15	85	33	26	23	32
30	12	9.7	7.0	7.0	---	5.6	13	69	31	30	23	30
31	11	---	6.8	6.5	---	5.4	---	69	---	30	23	---
TOTAL	424	313.0	259.5	212.4	146.2	156.3	346.7	1042	2167	774	811	821
MEAN	13.7	10.4	8.37	6.85	5.22	5.04	11.6	33.6	72.2	25.0	26.2	27.4
MAX	15	12	9.6	7.7	6.4	6.3	24	85	118	32	34	36
MIN	11	9.4	6.8	6.1	3.6	4.5	5.0	12	31	15	21	20
AC-FT	841	621	515	421	290	310	688	2070	4300	1540	1610	1630

CAL YR 1989 TOTAL 9666.3 MEAN 26.5 MAX 110 MIN 5.4 AC-FT 19170
WTR YR 1990 TOTAL 7473.1 MEAN 20.5 MAX 118 MIN 3.6 AC-FT 14820

09047500 SNAKE RIVER NEAR MONTEZUMA, CO

LOCATION.--Lat 39°36'20", long 105°56'33", in NW¼ sec.19, T.5 S., R.76 W. (projected), Summit County, Hydrologic Unit 14010002, on right bank 200 ft downstream from North Fork and 4.5 mi northwest of Montezuma.

DRAINAGE AREA.--57.7 mi².

PERIOD OF RECORD.--July 1942 to September 1946, October 1951 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,320 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 14, 1943, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Oct. 31 to Apr. 12. Records good except for estimated daily discharges, which are poor. Small diversions upstream from station for irrigation and domestic use. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--43 years, 61.4 ft³/s; 44,480 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft³/s, June 10, 1952, gage height, 3.51 ft; maximum gage height, 3.88 ft, June 6, 1972; minimum daily discharge, 5.0 ft³/s, Feb. 26, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 8	2100	*572	*3.40	No other peak greater than base discharge.			
Minimum daily, 6.4 ft ³ /s, Feb. 27.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	19	16	13	12	8.4	13	20	176	160	57	36
2	30	19	16	13	12	8.4	13	19	161	152	57	43
3	29	19	16	13	11	8.4	12	19	184	154	54	39
4	30	19	16	12	11	8.4	12	19	278	166	52	34
5	29	19	16	12	11	8.8	12	19	364	170	49	35
6	28	19	16	12	11	9.4	12	24	396	153	47	37
7	28	19	16	12	11	10	12	31	425	150	44	35
8	27	19	16	12	11	11	12	30	443	176	42	35
9	27	19	16	12	11	12	12	27	426	168	41	33
10	26	19	16	12	10	13	12	28	432	151	40	33
11	26	19	16	12	10	13	12	31	457	140	39	31
12	25	19	16	12	10	13	12	28	401	129	41	30
13	25	19	16	12	10	13	12	28	358	120	40	29
14	24	19	16	12	10	13	13	33	367	124	42	28
15	25	19	16	12	10	13	17	38	344	117	57	28
16	27	19	16	12	10	13	17	32	321	112	64	30
17	26	19	16	12	9.4	13	18	30	296	104	52	40
18	24	19	16	12	9.0	13	19	36	297	99	52	36
19	28	19	16	12	9.0	13	20	39	292	94	53	43
20	25	19	16	12	9.0	13	20	44	280	91	48	36
21	26	19	16	12	9.0	13	23	51	266	93	47	34
22	27	18	16	12	9.0	13	25	68	254	85	51	33
23	25	17	16	12	8.8	13	28	88	251	80	46	32
24	25	16	16	12	8.4	13	27	121	241	75	44	32
25	24	16	16	12	8.0	13	24	143	227	77	41	33
26	25	16	16	12	7.8	13	21	149	211	69	39	41
27	24	16	13	12	6.4	13	22	146	202	65	37	34
28	22	16	13	12	6.0	13	19	179	194	62	36	42
29	19	16	13	12	---	13	20	198	183	60	34	42
30	19	16	13	12	---	13	20	150	170	59	33	38
31	19	---	13	12	---	13	---	168	---	57	34	---
TOTAL	794	546	481	375	272.8	370.8	511	2036	8897	3512	1413	1052
MEAN	25.6	18.2	15.5	12.1	9.74	12.0	17.0	65.7	297	113	45.6	35.1
MAX	30	19	16	13	12	13	28	198	457	176	64	43
MIN	19	16	13	12	6.4	8.4	12	19	161	57	33	28
AC-FT	1570	1080	954	744	541	735	1010	4040	17650	6970	2800	2090

CAL YR 1989 TOTAL 21600 MEAN 59.2 MAX 342 MIN 10 AC-FT 42840
WTR YR 1990 TOTAL 20260.6 MEAN 55.5 MAX 457 MIN 6.4 AC-FT 40190

09047700 KEYSTONE GULCH NEAR DILLON, CO

LOCATION.--Lat 39°35'40", long 105°58'19", in NE¼NE¼ sec.26, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on right bank 0.7 mi upstream from mouth and 4.7 mi southeast of Dillon.

DRAINAGE AREA.--9.10 mi².

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,350 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1 to Apr. 12 and Apr. 29 to May 4. Records fair except for estimated daily discharges, which are poor. No known diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--33 years, 6.00 ft³/s; 4,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 118 ft³/s, June 27, 1983, gage height, 3.01 ft, from rating curve extended above 65 ft³/s; minimum daily discharge, 1.3 ft³/s, Feb. 22, 1967, and Feb. 15, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	2000	*46	*2.49	No other peak greater than base discharge.			

Minimum daily, 1.4 ft³/s, Feb. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	2.9	2.7	2.5	1.5	1.6	1.9	2.6	20	11	5.6	4.3
2	3.5	3.0	2.7	2.5	1.5	1.7	1.9	2.6	20	11	5.7	5.4
3	3.7	3.0	2.7	2.5	1.6	1.8	2.0	2.6	22	11	5.7	4.7
4	3.9	3.0	2.7	2.5	1.8	1.9	2.2	2.8	26	11	5.5	4.2
5	4.0	3.0	2.7	2.5	1.8	1.9	2.4	3.2	29	11	5.5	4.3
6	3.8	3.0	2.6	2.5	1.8	1.9	2.2	3.9	31	10	5.4	4.4
7	3.9	2.9	2.7	2.5	1.6	1.9	2.4	5.7	34	11	5.6	4.2
8	3.6	2.8	2.7	2.5	1.5	2.0	2.6	5.7	35	11	5.7	4.1
9	3.4	2.9	2.7	2.3	1.5	2.0	2.7	5.3	35	10	5.5	4.0
10	3.3	3.0	2.7	2.1	1.5	2.0	2.4	5.7	34	9.7	5.5	4.0
11	3.3	2.9	2.7	2.3	1.5	2.0	2.4	6.6	35	9.5	5.5	3.9
12	3.3	2.9	2.8	2.3	1.5	2.1	2.4	5.8	33	8.7	5.6	3.8
13	3.3	2.8	2.8	2.3	1.4	2.2	2.5	5.7	30	8.4	5.6	3.7
14	3.3	2.7	2.5	2.3	1.5	2.3	2.7	6.4	27	8.8	6.2	3.6
15	3.3	2.6	2.6	2.3	1.6	2.2	3.2	7.1	25	9.3	7.9	3.6
16	3.3	2.7	2.6	2.3	1.6	2.1	3.3	6.3	23	8.3	7.7	3.8
17	3.3	2.8	2.7	2.3	1.5	2.0	3.7	6.2	22	8.3	6.3	5.0
18	3.3	2.7	2.8	2.3	1.6	2.1	3.8	7.0	21	8.0	6.2	4.5
19	3.3	2.7	2.8	2.3	1.7	2.1	3.7	7.3	20	7.8	6.1	5.1
20	3.3	2.7	2.9	2.3	1.6	2.1	3.7	8.0	19	7.5	5.8	4.1
21	3.3	2.8	2.9	2.3	1.5	2.2	4.4	9.1	18	7.7	5.8	4.1
22	3.2	2.7	2.8	2.1	1.5	2.2	5.0	11	17	7.3	6.4	3.9
23	3.1	2.7	2.7	2.0	1.5	2.3	5.2	14	17	6.7	5.7	3.9
24	3.2	2.7	2.7	1.9	1.6	2.1	4.8	17	16	6.5	5.2	3.8
25	3.2	2.7	2.7	1.9	1.6	2.3	4.4	17	15	6.9	4.9	3.8
26	3.0	2.7	2.7	1.9	1.6	2.4	3.7	17	15	6.5	4.6	5.0
27	3.0	2.6	2.7	1.9	1.6	2.6	3.6	17	14	6.0	4.3	4.1
28	3.0	2.7	2.5	1.8	1.6	2.3	3.2	20	12	5.9	4.6	5.3
29	3.0	2.7	2.3	1.7	---	2.2	3.0	21	12	6.0	4.3	4.6
30	2.9	2.7	2.3	1.6	---	2.0	2.8	19	11	6.0	4.1	4.3
31	2.8	---	2.5	1.5	---	1.9	---	20	---	5.8	4.2	---
TOTAL	103.1	84.0	82.9	68.0	44.1	64.4	94.2	288.6	688	262.6	172.7	127.5
MEAN	3.33	2.80	2.67	2.19	1.57	2.08	3.14	9.31	22.9	8.47	5.57	4.25
MAX	4.0	3.0	2.9	2.5	1.8	2.6	5.2	21	35	11	7.9	5.4
MIN	2.8	2.6	2.3	1.5	1.4	1.6	1.9	2.6	11	5.8	4.1	3.6
AC-FT	204	167	164	135	87	128	187	572	1360	521	343	253

CAL YR 1989 TOTAL 2064.6 MEAN 5.66 MAX 27 MIN 1.5 AC-FT 4100
WTR YR 1990 TOTAL 2080.1 MEAN 5.70 MAX 35 MIN 1.4 AC-FT 4130

09050100 TENMILE CREEK BELOW NORTH TENMILE CREEK, AT FRISCO, CO

LOCATION.--Lat 39°34'31", long 106°06'36", in SE¼NW¼ sec.34, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 220 ft upstream from bridge on U.S. Highway 6, 160 ft downstream from North Tenmile Creek, and 0.6 mi west of Frisco.

DRAINAGE AREA.--93.3 mi².

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1971, published as "below North Fork, at Frisco."

GAGE.--Water-stage recorder. Elevation of gage is 9,100 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 21, 1981 at site 720 ft downstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 19-20, Oct. 26 to Nov. 12, and Nov. 15 to Apr. 19. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by a few small diversions upstream from station for irrigation and municipal use and transbasin diversion from Robinson Reservoir, capacity, 2,520 acre-ft, in Eagle River basin. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--33 years, 98.5 ft³/s; 71,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,910 ft³/s, June 16, 1965, gage height, 6.15 ft, from rating curve extended above 750 ft³/s; minimum daily, 7 ft³/s, Mar. 8, 14, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 8	2130	*822	*4.18	No other peak greater than base discharge.			
Minimum daily, 13 ft ³ /s, Feb. 16.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	17	17	19	20	23	21	33	347	212	64	30
2	26	17	18	19	20	24	22	34	310	202	64	36
3	26	19	19	18	20	24	24	34	315	205	66	34
4	26	20	20	18	20	23	26	35	433	210	57	36
5	28	21	21	17	20	23	25	37	559	204	53	39
6	28	22	21	18	20	22	24	46	545	208	49	51
7	28	19	21	19	20	21	23	63	606	203	47	42
8	28	18	21	20	21	20	24	73	667	192	44	37
9	28	19	21	21	21	20	27	68	633	188	41	37
10	27	19	21	23	22	19	26	71	631	173	39	35
11	26	17	21	24	22	20	25	81	629	158	39	31
12	25	17	19	24	23	20	24	68	625	142	39	31
13	24	18	16	24	23	19	23	68	598	132	44	27
14	24	16	17	23	18	17	26	83	575	141	38	25
15	23	15	17	23	15	16	29	106	523	129	41	24
16	28	15	18	22	13	16	34	99	476	126	56	23
17	26	16	18	22	14	16	41	87	422	123	53	30
18	25	16	18	21	16	16	48	96	424	108	51	34
19	25	17	18	21	18	17	48	101	422	106	50	30
20	24	17	19	20	19	18	49	119	390	101	46	29
21	24	17	19	21	19	19	47	141	373	102	46	28
22	23	17	20	21	19	21	47	190	353	98	50	28
23	23	17	20	21	19	23	47	237	341	89	49	27
24	21	17	21	20	20	22	47	300	324	82	48	27
25	21	16	21	19	21	21	41	309	311	87	41	27
26	20	16	21	20	22	22	36	318	299	79	37	31
27	19	16	21	20	23	23	34	296	276	76	34	30
28	18	15	21	17	23	24	34	304	261	74	33	33
29	18	15	20	18	---	22	35	345	247	72	36	36
30	18	16	20	19	---	21	34	295	226	69	31	35
31	17	---	20	20	---	20	---	320	---	67	31	---
TOTAL	743	517	605	632	551	632	991	4457	13141	4158	1417	963
MEAN	24.0	17.2	19.5	20.4	19.7	20.4	33.0	144	438	134	45.7	32.1
MAX	28	22	21	24	23	24	49	345	667	212	66	51
MIN	17	15	16	17	13	16	21	33	226	67	31	23
AC-FT	1470	1030	1200	1250	1090	1250	1970	8840	26070	8250	2810	1910

CAL YR 1989 TOTAL 30307 MEAN 83.0 MAX 548 MIN 11 AC-FT 60110
WTR YR 1990 TOTAL 28807 MEAN 78.9 MAX 667 MIN 13 AC-FT 57140

LOCATION.--Lat 39°37'32", long 106°03'57", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 0.3 mi downstream from Dillon Dam, 0.1 mi upstream from Straight Creek, and 1.1 mi west of Dillon.

PERIOD OF RECORD.--January 1960 to current year.

REMARKS.--Estimated daily discharges: Oct. 2, 4. Records good. Flow regulated since Sept. 3, 1963, by Dillon Reservoir, 0.3 mi upstream (station 09050600). Natural flow of stream affected by transmountain diversions, transbasin diversions, and diversions upstream from station for irrigation of about 400 acres of hay meadows. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,010 ft³/s, May 25, 1984, gage height, 3.88 ft; maximum gage height, 3.95 ft, June 22, 1983; no flow, Sept. 4 to Nov. 19, 1963.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	76	98	101	101	101	145	191	104	232	78	104
2	100	76	99	101	101	101	148	202	104	196	104	104
3	100	76	98	101	101	101	148	202	104	157	104	103
4	78	76	98	101	101	101	159	202	102	117	104	106
5	71	77	98	101	101	84	172	202	91	116	105	104
6	65	77	98	101	101	76	193	202	190	124	84	104
7	65	76	98	101	101	76	202	202	330	120	53	104
8	65	77	98	101	101	76	202	202	331	124	53	104
9	65	77	99	101	101	88	202	143	331	142	79	104
10	65	76	98	101	101	101	202	104	330	136	104	104
11	65	75	98	101	101	101	202	104	557	110	105	104
12	65	76	98	101	101	101	202	103	993	110	105	104
13	65	91	98	101	101	101	202	104	1170	139	104	104
14	65	101	100	101	101	101	202	104	1250	123	105	104
15	67	101	101	101	101	101	202	104	1260	112	104	104
16	67	101	101	101	101	101	202	104	1210	89	104	103
17	67	101	101	101	101	101	204	104	1130	52	104	104
18	85	101	101	101	101	101	205	104	1080	52	104	104
19	101	101	101	101	101	101	204	104	1040	51	104	104
20	101	101	101	101	101	101	222	104	958	51	104	104
21	101	101	101	101	101	101	234	104	841	51	104	104
22	101	101	101	101	101	101	234	104	709	51	104	104
23	101	101	101	101	101	117	218	104	621	51	119	104
24	101	100	101	101	101	128	136	104	558	51	128	104
25	86	100	101	101	101	128	106	104	507	51	128	104
26	77	101	101	101	101	128	107	104	465	51	128	104
27	76	101	101	101	101	138	106	104	420	51	128	106
28	77	101	101	101	101	146	106	104	370	52	128	104
29	76	100	101	101	---	145	105	104	320	53	112	105
30	76	98	101	101	---	145	148	104	274	53	104	106
31	76	---	101	101	---	145	---	104	---	52	104	---
TOTAL	2469	2717	3093	3131	2828	3337	5320	4035	17750	2920	3198	3125
MEAN	79.6	90.6	99.8	101	101	108	177	130	592	94.2	103	104
MAX	101	101	101	101	101	146	234	202	1260	232	128	106
MIN	65	75	98	101	101	76	105	103	91	51	53	103
AC-FT	4900	5390	6130	6210	5610	6620	10550	8000	35210	5790	6340	6200
CAL YR 1989	TOTAL 49864 MEAN 137 MAX 959 MIN 38 AC-FT 98910											
WTR YR 1990	TOTAL 53923 MEAN 148 MAX 1260 MIN 51 AC-FT 107000											

09051050 STRAIGHT CREEK BELOW LASKEY GULCH, NEAR DILLON, CO

LOCATION.--Lat 39°38'23", long 106°02'23", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.5, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on left bank, 120 ft upstream from culverts on Deer Trail Drive, in the community of Dillon Valley, 0.9 mi north of Dillon, 1.1 mi downstream of Laskey Gulch and 1.8 mi upstream from mouth.

DRAINAGE AREA.--18.3 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,070 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 26 to Nov. 18, Nov. 20-24, and Dec. 13 to Apr. 13. Records good except for estimated daily discharges, which are poor. Diversion upstream from station for municipal purposes downstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 146 ft³/s, July 5, 1990, gage height, 5.42 ft, maximum gage height, 5.71 ft, Mar. 5, 1989 (backwater from ice); minimum daily discharge, 2.4 ft³/s, Dec. 22, 1987, Feb. 20, 22, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 146 ft³/s at 1800 July 5, gage height, 5.42 ft; minimum daily, 3.3 ft³/s, Nov. 25, Dec. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	3.9	3.4	4.3	4.2	4.1	4.5	7.2	25	36	12	7.0
2	4.3	3.8	3.3	4.5	4.3	4.0	4.9	6.8	24	34	12	7.4
3	4.2	3.8	3.5	4.3	4.1	4.1	5.2	6.6	29	35	13	8.5
4	3.9	3.8	3.6	4.1	3.9	4.1	5.4	6.3	40	34	14	8.3
5	3.9	4.0	4.0	4.0	4.5	4.2	5.2	7.2	53	49	14	7.1
6	4.0	4.3	4.0	4.3	4.2	3.9	4.6	8.0	66	44	13	7.3
7	3.9	4.5	3.7	4.5	4.4	3.5	4.8	7.5	77	43	12	6.6
8	4.0	4.8	3.7	4.7	4.5	3.6	5.2	7.0	86	47	12	6.2
9	4.0	4.4	4.1	4.9	4.5	3.8	5.8	7.0	77	40	12	5.9
10	4.0	4.0	3.6	5.0	4.7	3.9	5.4	7.1	91	34	11	5.8
11	3.9	4.1	3.7	5.2	4.8	3.8	5.0	7.1	94	31	11	5.6
12	3.8	4.2	3.9	5.0	4.9	3.9	5.2	6.3	84	27	10	5.3
13	3.7	3.8	3.8	5.2	5.0	3.6	5.8	6.3	83	24	9.9	4.9
14	3.8	3.7	4.3	4.9	4.3	3.5	6.9	6.8	88	27	10	5.0
15	4.0	3.7	4.5	4.8	3.9	3.5	7.9	7.4	76	25	12	4.9
16	4.3	3.6	4.3	4.8	3.5	3.5	7.6	6.7	66	23	11	5.4
17	4.5	3.7	4.1	4.2	4.0	3.6	7.4	6.8	60	22	13	7.6
18	3.7	3.7	4.0	4.1	4.0	3.9	7.5	6.7	60	20	13	6.3
19	3.8	3.7	4.1	4.1	4.5	4.2	7.6	6.8	59	20	13	7.1
20	4.0	3.9	4.2	4.0	4.0	4.4	7.6	7.7	61	21	10	6.0
21	4.3	4.0	4.5	4.2	4.5	4.6	7.8	9.3	57	23	10	5.8
22	4.2	3.7	4.3	4.3	4.0	4.5	8.7	11	57	20	9.8	5.6
23	4.2	3.5	4.1	4.3	4.1	4.8	8.7	14	56	19	9.2	5.4
24	3.9	3.6	4.5	4.3	4.2	4.6	8.7	18	53	18	8.6	5.2
25	4.6	3.3	4.5	4.0	4.5	4.5	8.0	21	50	20	8.0	5.2
26	4.5	3.9	4.7	4.2	4.4	4.5	7.3	21	49	18	7.4	7.0
27	4.4	3.9	4.5	4.5	4.3	4.8	7.1	22	47	16	7.3	5.7
28	4.3	3.6	4.7	3.6	4.2	5.0	7.1	27	46	14	6.7	7.9
29	4.2	3.4	4.3	3.7	---	4.6	6.2	29	42	13	6.6	6.8
30	4.0	3.4	4.3	3.9	---	4.3	6.7	23	38	13	6.4	6.2
31	4.0	---	4.2	4.1	---	4.2	---	25	---	12	6.6	---
TOTAL	126.4	115.7	126.4	136.0	120.4	127.5	195.8	359.6	1794	822	324.5	189.0
MEAN	4.08	3.86	4.08	4.39	4.30	4.11	6.53	11.6	59.8	26.5	10.5	6.30
MAX	4.6	4.8	4.7	5.2	5.0	5.0	8.7	29	94	49	14	8.5
MIN	3.7	3.3	3.3	3.6	3.5	3.5	4.5	6.3	24	12	6.4	4.9
AC-FT	251	229	251	270	239	253	388	713	3560	1630	644	375

CAL YR 1989 TOTAL 4496.4 MEAN 12.3 MAX 59 MIN 3.3 AC-FT 8920
WTR YR 1990 TOTAL 4437.3 MEAN 12.2 MAX 94 MIN 3.3 AC-FT 8800

09052000 ROCK CREEK NEAR DILLON, CO

LOCATION.--Lat 39°43'23", long 106°07'41", in NE¼ sec.9, T.4 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 500 ft upstream from bridge on State Highway 9, 1,100 ft upstream from mouth, 1,200 ft downstream from confluence of North and South Rock Creeks, and 8 mi northwest of Dillon.

DRAINAGE AREA.--15.8 mi².

PERIOD OF RECORD.--July 1942 to September 1956, October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 8,502.52 ft, (Colorado Highway Department datum). Prior to Apr. 21, 1943, nonrecording gage, and Apr. 21, 1943, to Sept. 13, 1950, water-stage recorder, at site 500 ft downstream at datum 28.76 ft, lower.

REMARKS.--Estimated daily discharges: Oct. 30 to Nov. 4, Nov. 8, 12-13, 15-18, and Nov. 26 to Apr. 11. Records good except for estimated daily discharges, which are poor. A few small diversions for irrigation of hay meadows upstream and downstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--38 years, (water years 1943-56, 1967-90), 22.9 ft³/s; 16,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 289 ft³/s, June 10, 1973, gage height, 4.35 ft, from rating curve extended above 154 ft³/s; maximum gage height, 4.36 ft, June 24, 1971; minimum daily discharge, 1.8 ft³/s, Mar. 28 to Apr. 1, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	2400	*159	*3.83				

Minimum daily, 2.3 ft³/s, Feb. 24-26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	5.9	6.4	3.5	2.5	3.5	6.4	9.6	66	64	20	12
2	7.8	5.8	6.4	3.5	2.5	3.5	6.4	9.2	49	60	22	13
3	7.9	5.7	6.4	3.5	2.5	3.5	6.4	8.8	44	64	21	12
4	8.0	5.5	6.4	3.5	2.5	3.5	6.4	8.7	75	73	19	13
5	8.1	5.5	6.4	3.5	2.5	3.5	6.6	9.5	105	58	18	14
6	7.9	6.4	6.6	3.5	2.5	3.7	7.0	12	114	56	17	24
7	7.6	6.5	6.6	3.5	2.5	4.0	7.0	16	118	56	16	20
8	7.4	6.3	6.6	3.1	2.5	4.1	7.0	16	120	66	16	16
9	7.4	6.2	6.8	2.7	2.5	4.4	7.0	14	120	67	15	15
10	7.2	6.3	6.8	2.5	2.5	4.6	7.0	15	128	54	15	13
11	6.9	6.7	7.2	2.5	2.5	4.8	7.0	18	125	45	15	12
12	6.6	6.6	7.0	2.5	2.5	5.0	6.9	16	122	41	16	12
13	6.6	6.6	7.0	2.5	2.5	5.0	6.8	16	92	39	16	11
14	6.4	6.6	7.0	2.5	2.5	5.0	7.8	17	96	42	15	10
15	6.4	6.4	7.0	2.5	2.5	5.0	9.9	19	90	39	14	10
16	7.2	6.4	6.4	2.5	2.5	5.0	12	16	76	34	15	10
17	7.5	6.4	5.8	2.5	2.5	5.0	13	15	72	31	16	12
18	6.8	6.2	5.2	2.5	2.5	5.0	14	17	77	32	16	13
19	8.2	6.2	5.0	2.5	2.5	5.0	14	18	84	39	15	12
20	8.7	6.2	5.0	2.5	2.5	5.4	15	21	79	35	15	11
21	7.0	6.0	5.0	2.5	2.5	5.8	17	27	77	34	22	11
22	7.0	6.0	5.0	2.5	2.5	6.0	19	37	74	31	17	10
23	6.9	6.0	5.0	2.5	2.5	6.4	18	51	77	27	15	9.7
24	6.7	6.0	5.0	2.5	2.3	6.4	17	74	78	26	14	9.4
25	6.6	6.0	5.0	2.5	2.3	6.4	15	78	74	30	13	9.3
26	6.7	6.0	4.7	2.5	2.3	6.4	13	75	78	29	12	12
27	6.7	6.2	4.5	2.5	2.6	6.4	11	69	81	27	11	11
28	7.1	6.2	4.2	2.5	3.0	6.4	11	79	77	25	11	11
29	6.5	6.2	3.9	2.5	---	6.4	9.3	88	70	24	10	12
30	6.2	6.2	3.5	2.5	---	6.4	10	57	64	23	10	13
31	6.0	---	3.5	2.5	---	6.4	---	75	---	21	12	---
TOTAL	221.8	185.2	177.3	85.3	70.0	157.9	313.9	1001.8	2602	1292	479	373.4
MEAN	7.15	6.17	5.72	2.75	2.50	5.09	10.5	32.3	86.7	41.7	15.5	12.4
MAX	8.7	6.7	7.2	3.5	3.0	6.4	19	88	128	73	22	24
MIN	6.0	5.5	3.5	2.5	2.3	3.5	6.4	8.7	44	21	10	9.3
AC-FT	440	367	352	169	139	313	623	1990	5160	2560	950	741

CAL YR 1989 TOTAL 6691.3 MEAN 18.3 MAX 89 MIN 1.5 AC-FT 13270
WTR YR 1990 TOTAL 6959.6 MEAN 19.1 MAX 128 MIN 2.3 AC-FT 13800

09052400 BOULDER CREEK AT UPPER STATION, NEAR DILLON, CO

LOCATION.--Lat 39°43'41", long 106°10'22", in SW¼SW¼ sec.6, T.4 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank 1.2 mi downstream from Boulder Lake, 3.2 mi upstream from mouth, and 9.4 mi northwest of Dillon.

DRAINAGE AREA.--8.56 mi².

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WDR CO-89-2: 1988 (M).

GAGE.--Water-stage recorder. Elevation of gage is 9,460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-17, 19, Oct. 24 to May 21, and May 26 to June 13. Records poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 17.0 ft³/s; 12,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 316 ft³/s, July 1, 1984, gage height, 3.42 ft; minimum daily, 0.80 ft³/s, Jan. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 120 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
(a)	unknown	unknown	unknown	No other peak greater than base discharge.			
Minimum daily, 1.8 ft ³ /s, Mar. 30 to Apr. 11.							
a Sometime during period June 4-10.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	4.3	4.8	3.3	2.6	2.7	1.8	5.0	40	56	14	7.3
2	3.0	4.2	4.7	3.2	2.6	2.7	1.8	4.5	35	52	16	7.3
3	3.0	4.0	4.7	3.1	2.6	2.7	1.8	4.5	30	54	14	7.9
4	3.0	3.8	4.7	3.0	2.6	2.7	1.8	4.7	60	59	13	9.8
5	3.0	3.6	4.6	2.9	2.6	2.7	1.8	5.0	100	48	12	10
6	3.1	3.5	4.5	2.9	2.6	2.7	1.8	6.0	130	45	11	14
7	3.2	3.3	4.5	2.8	2.6	2.4	1.8	8.0	120	43	11	13
8	3.2	3.2	4.4	2.8	2.6	2.0	1.8	11	110	51	11	11
9	3.5	3.1	4.4	2.8	2.6	1.9	1.8	12	120	45	11	9.9
10	3.5	2.9	4.3	2.7	2.6	1.9	1.8	12	110	39	11	8.8
11	3.5	2.8	4.3	2.7	2.6	1.9	1.8	13	110	36	10	8.1
12	3.5	2.7	4.2	2.7	2.7	1.9	2.0	14	100	32	10	7.5
13	3.5	2.7	4.2	2.6	2.7	1.9	2.2	14	70	29	10	7.0
14	3.5	2.7	4.2	2.6	2.7	1.9	2.4	13	88	31	9.5	6.7
15	3.6	2.6	4.2	2.6	2.7	1.9	2.6	13	81	28	9.8	6.4
16	3.8	2.6	4.3	2.6	2.7	1.9	3.5	13	67	25	12	6.3
17	3.6	2.6	4.4	2.6	2.7	1.9	4.5	13	67	24	13	7.2
18	3.2	2.6	4.5	2.6	2.7	1.9	5.0	13	72	25	13	8.6
19	3.1	2.6	4.6	2.6	2.7	1.9	6.0	13	80	30	13	8.1
20	3.2	2.6	4.7	2.6	2.7	1.9	7.0	14	77	27	12	7.4
21	3.4	2.6	4.6	2.6	2.7	1.9	8.0	15	76	28	12	6.8
22	3.2	2.6	4.5	2.6	2.7	1.9	10	26	72	24	11	6.4
23	3.0	2.6	4.4	2.6	2.7	1.9	14	35	76	21	10	6.0
24	3.5	2.7	4.2	2.6	2.7	1.9	13	44	76	19	9.4	5.8
25	4.0	3.0	4.0	2.6	2.7	1.9	11	46	73	22	8.7	5.7
26	4.2	3.5	3.9	2.6	2.7	1.9	9.0	70	74	20	8.1	9.2
27	4.5	4.0	3.8	2.6	2.7	1.9	8.0	60	78	18	7.6	8.3
28	4.5	4.5	3.7	2.6	2.7	1.9	7.0	70	73	17	7.3	8.2
29	4.5	4.7	3.6	2.6	---	1.9	6.0	80	65	16	7.0	8.5
30	4.5	4.8	3.5	2.6	---	1.8	5.5	60	58	15	7.1	10
31	4.3	---	3.4	2.6	---	1.8	---	50	---	14	7.2	---
TOTAL	109.6	97.4	132.8	84.3	74.5	64.1	146.5	761.7	2388	993	331.7	247.2
MEAN	3.54	3.25	4.28	2.72	2.66	2.07	4.88	24.6	79.6	32.0	10.7	8.24
MAX	4.5	4.8	4.8	3.3	2.7	2.7	14	80	130	59	16	14
MIN	3.0	2.6	3.4	2.6	2.6	1.8	1.8	4.5	30	14	7.0	5.7
AC-FT	217	193	263	167	148	127	291	1510	4740	1970	658	490

CAL YR 1989 TOTAL 5324.9 MEAN 14.6 MAX 86 MIN 1.3 AC-FT 10560
WTR YR 1990 TOTAL 5430.8 MEAN 14.9 MAX 130 MIN 1.8 AC-FT 10770

09052800 SLATE CREEK AT UPPER STATION, NEAR DILLON, CO

LOCATION.--Lat 39°45'47", long 106°11'31", in SW¼NW¼ sec.25, T.3 S., R.79 W., Summit County, Hydrologic Unit 14010002, on left bank 0.2 mi upstream from unnamed tributary, 2.7 mi upstream from mouth, and 12 mi northwest of Dillon.

DRAINAGE AREA.--14.2 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,040 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 2 to Apr. 11. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 26.0 ft³/s; 18,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 485 ft³/s, Aug. 5, 1983, gage height, 6.14 ft, from rating curve extended above 170 ft³/s; maximum gage height, 6.56 ft, May 2, 1975 (backwater from beaver dam and ice); minimum daily discharge, 1.0 ft³/s, Mar. 14, 1974, and Jan. 12, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 9	0300	*196	*4.77	No other peak greater than base discharge.			
Minimum daily, 1.4 ft ³ /s, Jan. 23-27.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	4.7	6.2	3.0	1.6	4.5	5.3	14	71	75	20	10
2	6.0	4.7	6.0	2.8	1.6	4.6	5.4	14	59	69	23	11
3	5.7	4.6	5.7	2.7	1.6	4.6	5.5	14	52	73	22	12
4	6.0	4.4	5.5	2.6	1.7	4.6	5.6	13	77	84	20	13
5	6.3	4.2	5.4	2.5	1.8	4.6	5.7	13	124	71	19	16
6	6.2	4.1	5.3	2.4	1.9	4.8	5.8	13	147	70	18	22
7	6.1	4.0	5.1	2.3	2.0	5.0	5.9	18	149	66	17	20
8	5.8	3.9	5.0	2.2	2.1	5.3	6.0	21	148	108	16	17
9	5.7	3.9	5.0	2.1	2.2	5.4	6.0	17	154	89	16	15
10	5.5	4.0	4.9	2.0	2.3	5.4	6.0	17	163	67	15	14
11	5.1	4.1	4.9	1.9	2.4	5.2	6.0	20	147	63	15	12
12	4.8	4.2	4.8	1.8	2.5	5.3	6.2	20	137	51	15	11
13	4.7	4.2	4.9	1.7	2.7	5.4	5.9	18	91	44	15	10
14	4.6	4.2	4.9	1.7	2.8	5.5	7.2	17	112	47	14	9.7
15	4.8	4.2	5.0	1.6	3.0	5.6	9.8	23	104	45	14	9.3
16	5.7	4.1	5.2	1.6	3.3	5.6	11	21	81	39	19	9.1
17	6.0	4.0	5.4	1.6	3.6	5.4	13	18	78	36	22	10
18	5.8	4.0	5.3	1.6	4.0	5.3	13	19	93	36	24	13
19	5.4	3.9	5.1	1.5	4.7	5.3	14	21	103	47	23	13
20	5.4	3.9	4.9	1.5	4.9	5.2	15	23	96	42	21	12
21	5.2	3.9	4.7	1.5	5.0	5.2	18	30	97	49	19	10
22	5.2	4.1	4.5	1.5	5.2	5.2	20	44	91	43	18	9.7
23	5.1	4.3	4.3	1.4	5.1	5.2	20	59	97	35	17	9.0
24	5.0	4.5	4.1	1.4	5.0	5.2	20	75	104	31	15	8.6
25	4.9	4.8	4.0	1.4	4.9	5.2	18	84	98	35	14	9.0
26	5.0	5.0	3.8	1.4	4.7	5.1	16	84	101	34	12	15
27	4.9	5.5	3.7	1.4	4.6	5.1	13	80	104	29	11	16
28	4.9	6.0	3.5	1.5	4.5	5.1	13	98	99	27	11	15
29	5.0	6.6	3.4	1.5	---	5.1	14	114	90	25	10	18
30	4.7	6.4	3.2	1.5	---	5.1	14	82	80	23	10	18
31	4.8	---	3.1	1.5	---	5.2	---	86	---	21	10	---
TOTAL	166.5	134.4	146.8	57.1	91.7	159.3	324.3	1190	3147	1574	515	387.4
MEAN	5.37	4.48	4.74	1.84	3.27	5.14	10.8	38.4	105	50.8	16.6	12.9
MAX	6.3	6.6	6.2	3.0	5.2	5.6	20	114	163	108	24	22
MIN	4.6	3.9	3.1	1.4	1.6	4.5	5.3	13	52	21	10	8.6
AC-FT	330	267	291	113	182	316	643	2360	6240	3120	1020	768

CAL YR 1989 TOTAL 7942.2 MEAN 21.8 MAX 128 MIN 1.8 AC-FT 15750
WTR YR 1990 TOTAL 7893.5 MEAN 21.6 MAX 163 MIN 1.4 AC-FT 15660

09054000 BLACK CREEK BELOW BLACK LAKE, NEAR DILLON, CO

LOCATION.--Lat 39°47'57", long 106°16'04", in SW¼SW¼ sec.8, T.3 S., R.79 W., Summit County, Hydrologic Unit 14010002, on right bank 600 ft upstream from bridge, 0.3 mi downstream from Black Lake, 4.5 mi upstream from highwater line of Green Mountain Reservoir at elevation 7,950 ft, and 17 mi northwest of Dillon.

DRAINAGE AREA.--15.0 mi².

PERIOD OF RECORD.--July 1942 to September 1949, October 1966 to current year.

REVISED RECORDS.--WSP 2124: Drainage area, WDR CO-77-2: 1976.

GAGE.--Water-stage recorder. Elevation of gage is 8,750 ft above National Geodetic Vertical Datum of 1929, from topographic map. July 17, 1942, to May 27, 1943, nonrecording gage, and May 28, 1943, to Sept. 30, 1949, water-stage recorder at site 550 ft downstream at different datums. Oct. 1, 1949 to Oct. 2, 1989 water-stage recorder at site 50 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 28 to Mar. 15 and July 15-17. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--31 years, 32.1 ft³/s; 23,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 555 ft³/s, June 25, 1983, gage height, 4.74 ft, site and datum then in use, from rating curve extended above 240 ft³/s, maximum gage height, 5.64 ft, June 30, 1984, site and datum then in use; minimum daily discharge, 1.3 ft³/s, Feb. 22, 1976, Jan. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 7	0200	*257	*2.63	No other peak greater than base discharge.			

Minimum daily, 1.7 ft³/s, Feb. 1-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	4.8	4.0	3.0	1.7	1.9	3.1	11	71	93	29	16
2	4.2	4.6	4.0	3.0	1.7	1.9	3.2	10	55	88	33	16
3	7.5	4.4	4.0	3.0	1.7	1.9	3.4	9.6	48	84	30	18
4	5.1	5.9	4.0	3.0	1.9	1.9	3.6	9.4	88	85	28	19
5	5.0	5.5	4.0	3.0	1.9	1.9	3.9	10	163	81	26	21
6	5.1	5.2	4.0	3.0	1.9	1.9	4.3	13	196	88	25	31
7	5.0	5.1	4.0	3.0	1.9	1.9	4.6	23	187	79	24	27
8	4.9	5.1	4.0	3.0	1.9	2.0	4.9	24	173	144	24	23
9	4.8	4.9	4.0	3.0	1.9	2.1	5.3	20	193	110	24	21
10	4.8	4.5	4.0	3.0	1.9	2.2	5.6	19	211	77	23	19
11	4.9	4.4	4.0	3.0	1.9	2.4	5.6	25	186	77	23	17
12	4.7	4.2	4.0	3.0	1.9	2.6	5.7	22	189	61	24	16
13	4.5	4.5	4.0	3.0	1.9	2.7	5.6	20	108	52	23	15
14	4.4	4.6	4.0	3.0	1.9	2.7	5.6	18	137	55	22	14
15	4.5	3.9	4.0	3.0	1.9	2.7	6.2	22	130	53	22	13
16	4.5	3.8	4.0	3.0	1.9	2.5	8.8	22	99	48	24	12
17	4.6	3.6	4.0	3.0	1.9	2.7	12	20	91	45	28	13
18	4.8	3.5	3.7	3.0	1.9	2.7	15	20	112	45	30	17
19	4.7	3.5	3.4	3.0	1.9	2.6	17	21	132	53	29	19
20	4.6	3.4	3.3	3.0	1.9	2.5	18	22	123	51	26	18
21	4.9	3.3	3.3	3.0	1.9	2.5	22	26	122	57	24	16
22	5.1	3.3	3.3	3.0	1.9	2.5	23	43	114	48	24	14
23	5.1	3.4	3.3	3.0	1.9	2.6	24	62	123	40	23	13
24	5.3	3.5	3.3	3.0	1.9	2.7	23	88	132	36	21	12
25	5.4	3.3	3.3	3.0	1.9	2.7	20	88	123	48	20	12
26	6.8	3.4	3.3	3.0	1.9	2.7	17	86	128	46	19	11
27	5.3	3.5	3.3	2.8	1.9	2.8	14	81	130	40	18	11
28	5.4	3.7	3.3	2.5	1.9	3.0	14	95	128	36	17	11
29	5.4	3.7	3.1	2.3	---	3.1	13	124	114	33	16	13
30	5.4	4.0	3.0	2.0	---	3.1	12	76	98	31	15	15
31	5.9	---	3.0	1.8	---	3.1	---	82	---	29	15	---
TOTAL	157.5	124.5	113.9	89.4	52.6	76.5	323.4	1212.0	3904	1913	729	493
MEAN	5.08	4.15	3.67	2.88	1.88	2.47	10.8	39.1	130	61.7	23.5	16.4
MAX	7.5	5.9	4.0	3.0	1.9	3.1	24	124	211	144	33	31
MIN	4.2	3.3	3.0	1.8	1.7	1.9	3.1	9.4	48	29	15	11
AC-FT	312	247	226	177	104	152	641	2400	7740	3790	1450	978

CAL YR 1989 TOTAL 10158.0 MEAN 27.8 MAX 158 MIN 2.0 AC-FT 20150
WTR YR 1990 TOTAL 9188.8 MEAN 25.2 MAX 211 MIN 1.7 AC-FT 18230

09055300 CATARACT CREEK NEAR KREMMLING, CO

LOCATION.--Lat 39°50'07", long 106°18'57", in SW¼NE¼ sec.35, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, on right bank 70 ft downstream from lower Cataract Lake, 2.8 mi upstream from highwater line of Green Mountain Reservoir at elevation 7,950 ft, and 17 mi south of Kremmling.

DRAINAGE AREA.--12.0 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,605 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 20.2 ft³/s; 14,630 acre-ft/yr. The figure published in the 1989 report was in error; the correct figure is 23 years, 20.4 ft³/s; 14,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 353 ft³/s, June 25, 1983, gage height, 5.20 ft, maximum gage height, 5.43 ft, June 21, 1967; minimum daily discharge, 0.28 ft³/s, Oct. 7, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	0300	*228	*4.49	No other peak greater than base discharge.			
Minimum daily, 0.51 ft ³ /s, Sept. 15.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	1.7	1.9	1.2	.59	.75	1.6	7.7	53	51	9.8	.61
2	.72	1.7	1.8	1.1	.61	.75	1.7	7.4	43	49	9.2	.63
3	.78	1.6	1.8	.98	.65	.72	2.0	7.2	39	48	9.2	.56
4	.80	1.7	1.7	.98	.63	.75	2.1	7.1	69	48	8.4	.54
5	.93	1.5	1.6	.93	.60	.75	2.3	7.3	148	45	7.5	.61
6	1.1	1.4	1.6	.92	.60	.93	2.5	8.9	179	45	6.9	.90
7	1.2	1.3	1.6	.89	.59	1.1	2.7	15	162	43	6.2	.95
8	1.3	1.4	1.6	.88	.59	1.1	3.0	21	143	55	5.6	1.1
9	1.3	1.2	1.6	.82	.63	1.0	3.4	18	165	63	5.1	1.2
10	1.3	1.2	1.8	.78	.65	1.0	3.4	16	163	53	4.7	1.0
11	1.3	1.3	1.9	.73	.63	.98	3.4	20	159	50	4.3	.85
12	1.2	1.4	1.9	.65	.62	1.0	3.6	20	172	44	4.2	.72
13	1.2	1.7	1.8	.65	.61	1.1	3.8	18	111	37	4.3	.58
14	1.1	2.1	1.8	.65	.61	1.2	3.8	18	138	34	4.1	.52
15	1.0	1.7	1.8	.65	.67	1.2	4.6	23	118	32	4.0	.51
16	1.4	1.6	1.8	.63	.73	1.1	6.5	23	89	26	4.2	.54
17	1.5	1.5	1.9	.60	.75	1.1	8.0	18	72	23	4.3	.77
18	1.6	1.4	1.9	.60	.79	1.1	8.8	17	84	20	4.4	1.5
19	1.7	1.4	2.0	.60	.80	1.0	9.7	17	97	28	5.0	2.3
20	1.8	1.3	1.9	.60	.80	1.0	12	17	85	28	4.8	2.8
21	1.4	1.3	1.8	.56	.80	.98	13	20	80	31	4.1	2.4
22	1.3	1.3	1.8	.56	.80	.98	17	31	76	29	3.8	2.0
23	1.3	1.3	1.8	.55	.82	1.0	22	38	76	23	3.6	1.8
24	1.5	1.3	1.7	.56	.80	1.1	19	46	80	18	3.3	1.7
25	1.5	1.5	1.6	.55	.80	1.1	17	56	72	20	3.0	1.7
26	3.1	1.7	1.5	.53	.77	1.1	14	85	69	24	2.6	1.8
27	2.7	2.2	1.5	.60	.75	1.2	11	72	71	20	2.1	1.9
28	2.3	2.2	1.4	.59	.75	1.4	9.5	78	66	16	1.7	1.8
29	2.1	2.1	1.3	.60	---	1.6	9.1	101	60	14	1.5	1.5
30	1.9	2.0	1.3	.60	---	1.6	8.3	63	53	12	1.2	1.7
31	1.7	---	1.2	.60	---	1.6	---	56	---	11	.74	---
TOTAL	44.93	47.0	52.6	22.14	19.44	33.29	228.8	952.6	2992	1040	143.84	37.49
MEAN	1.45	1.57	1.70	.71	.69	1.07	7.63	30.7	99.7	33.5	4.64	1.25
MAX	3.1	2.2	2.0	1.2	.82	1.6	22	101	179	63	9.8	2.8
MIN	.72	1.2	1.2	.53	.59	.72	1.6	7.1	39	11	.74	.51
AC-FT	89	93	104	44	39	66	454	1890	5930	2060	285	74

CAL YR 1989 TOTAL 5409.85 MEAN 14.8 MAX 130 MIN .72 AC-FT 10730
WTR YR 1990 TOTAL 5614.13 MEAN 15.4 MAX 179 MIN .51 AC-FT 11140

RESERVOIRS IN BLUE RIVER BASIN

09050600 DILLON RESERVOIR.--Lat 39°37'14", long 106°03'53", in NE¼ sec.13, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, in gatehouse at dam, 0.8 mi upstream from Straight Creek, about 1.3 mi southwest of Dillon, and 3.5 mi northeast of Frisco. DRAINAGE AREA, 335 mi². PERIOD OF RECORD, September 1963 to current year. GAGE, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Denver Board of Water Commissioners); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

Reservoir is earth and rockfill dam. Dam completed and storage began Sept. 3, 1963; dead storage pool filled Sept. 12, 1963. Capacity, 254,000 acre-ft between elevations 8,829.00 ft, invert of outlet valve, and 9,017.00 ft, crest of spillway. Dead storage, 3,270 acre-ft. Figures given represent usable contents. Reservoir stores water for transmountain diversion to South Platte River basin through Harold D. Roberts tunnel for municipal use by city of Denver. Records provided by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 262,200 acre-ft, June 30, 1983, elevation, 9,019.46 ft; minimum since appreciable storage was attained in July 1964, 45,310 acre-ft, Apr. 20, 1965, elevation, 8,904.16 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 259,600 acre-ft, June 13, 14, elevation, 9,018.70 ft; minimum, 215,200 acre-ft, Apr. 22, elevation, 9,004.09 ft.

09057000 GREEN MOUNTAIN RESERVOIR.--Lat 39°52'42", long 106°19'45", in NE¼ sec.15, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, in hoist house at right end of dam, 0.6 mi upstream from Elliott Creek, and 13 mi southeast of Kremmling. DRAINAGE AREA, 598 mi², includes 15.3 mi² of Elliott Creek above diversion for Elliott Creek feeder canal. PERIOD OF RECORD, November 1942 to current year. REVISED RECORDS, WSP 2124; Drainage area. GAGE, Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

Reservoir is formed by an earth and rockfill dam. Dam completed and storage began November 1942. Capacity, 146,900 acre-ft between elevations 7,800 ft, sill of outlet gate, and 7,950 ft, top of radial spillway gates. Dead storage, 6,860 acre-ft. Figures given represent usable contents. Reservoir is used for power development and storage for replacement of water diverted to South Platte River basin. Water released to fill decrees during late irrigation season when flow of Colorado River is deficient. Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 148,900 acre-ft, July 10, 1947, elevation, 7,950.95 ft; minimum since appreciable storage was attained, 388 acre-ft, Jan. 12, 1963, elevation, 7,801.70 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 146,000 acre-ft, July 17, elevation, 7,949.62 ft; minimum, 49,420 acre-ft, Apr. 19, elevation, 7,887.00 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation a(feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation a(feet)	Contents (acre-feet)	Change in contents (acre-feet)
	09050600	DILLON RESERVOIR		09057000	GREEN MOUNTAIN RESERVOIR	
Sept. 30.....	9,015.71	249,900	-	7,919.76	91,120	-
Oct. 31.....	9,015.75	250,000	+100	7,901.52	65,810	-25,310
Nov. 30.....	9,013.16	241,900	-8,100	7,900.62	64,700	-1,110
Dec. 31.....	9,010.22	232,900	-9,000	7,899.06	62,790	-1,910
CAL YR 1989...	-	-	-4,900	-	-	-5,370
Jan. 31.....	9,007.81	225,800	-7,100	7,896.73	60,030	-2,760
Feb. 28.....	9,005.96	220,500	-5,300	7,894.72	57,720	-2,310
Mar. 31.....	9,005.18	218,300	-2,200	7,893.06	55,850	-1,870
Apr. 30.....	9,004.57	216,600	-1,700	7,889.86	52,390	-3,460
May 31.....	9,010.67	234,300	+17,700	7,902.31	66,800	+14,410
June 30.....	9,017.41	255,400	+21,100	7,944.55	135,500	+68,700
July 31.....	9,016.52	252,500	-2,900	7,948.96	144,600	+9,100
Aug. 31.....	9,016.32	251,800	-700	7,930.82	109,400	-35,200
Sept. 30.....	9,016.89	253,700	+1,900	7,906.40	72,070	-37,330
WTR YR 1990...	-	-	+3,800	-	-	-19,050

a-National Geodetic Vertical Datum of 1929

09057500 BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR, CO

LOCATION.--Lat 39°52'49", long 106°20'00", in SW¼NE¼ sec.15, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, on left bank 0.3 mi upstream from Elliott Creek, 0.3 mi downstream from Green Mountain Dam, and 13 mi southeast of Kremmling.

DRAINAGE AREA.--599 mi², includes 15.3 mi² of Elliott Creek above diversion for Elliott Creek feeder canal.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1943, published as Blue River below Green Mountain Reservoir, near Kremmling. Water-quality data available, January 1986 to September 1987.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,682.66 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Oct. 1, 1951, water-stage recorder at site 3.7 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Green Mountain Reservoir since November 1942 (station 09057000). Diversions for irrigation of about 5,000 acres upstream from station. Transmountain diversions upstream from station (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s, June 4, 1938, gage height, 5.93 ft, site and datum then in use, from rating curve extended above 3,000 ft³/s; maximum gage height, 9.52 ft, July 11, 1983; minimum daily discharge (prior to construction of Green Mountain Reservoir), 80 ft³/s, Feb. 18-24, 1938, Feb. 18-19, 1940; no flow at times in 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,280 ft³/s at 2045 Aug. 31, gage height, 6.59 ft; minimum daily, 55 ft³/s, May 19-28, May 30 to June 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	604	207	164	176	173	179	268	227	55	91	458	1260
2	604	191	166	177	172	180	258	228	55	90	567	1250
3	638	171	163	177	170	180	251	255	55	89	606	1250
4	682	171	165	178	171	179	308	334	55	87	604	1240
5	711	169	160	177	172	181	431	370	55	87	604	1140
6	732	169	159	176	173	186	576	374	55	89	673	1100
7	777	168	159	176	176	178	617	314	55	83	746	1100
8	797	167	170	166	176	171	616	172	56	83	777	1110
9	795	175	170	180	176	169	565	73	56	87	790	1170
10	799	174	160	176	176	168	530	71	56	246	826	1170
11	753	175	173	177	175	168	534	69	56	425	870	1130
12	703	177	165	175	174	174	532	69	59	404	870	1080
13	700	167	160	174	170	174	531	69	63	382	866	889
14	699	161	172	179	172	173	533	69	68	357	812	888
15	697	160	173	177	172	175	533	69	116	362	821	886
16	673	159	174	176	177	176	532	69	204	365	843	871
17	658	159	175	176	176	177	475	71	204	361	852	819
18	627	158	176	182	172	176	357	61	168	352	872	743
19	545	157	177	171	172	174	306	55	132	345	834	684
20	504	157	177	175	177	179	261	55	131	317	843	631
21	503	158	174	177	173	173	197	55	128	291	848	539
22	504	157	172	175	171	175	198	55	133	290	853	559
23	503	156	177	174	173	172	147	55	131	295	848	533
24	479	157	175	174	172	171	102	55	127	294	842	495
25	460	157	174	175	170	173	83	55	110	296	944	484
26	430	156	175	180	168	175	78	55	91	296	941	480
27	417	157	177	183	177	191	108	55	96	294	985	480
28	349	164	178	180	171	230	148	55	92	326	1070	473
29	233	163	176	178	---	234	149	56	93	348	1210	465
30	217	164	177	175	---	239	201	55	91	374	1190	466
31	208	---	177	170	---	260	---	55	---	417	1260	---
TOTAL	18001	4981	5290	5462	4847	5710	10425	3680	2846	8223	26125	25385
MEAN	581	166	171	176	173	184	347	119	94.9	265	843	846
MAX	799	207	178	183	177	260	617	374	204	425	1260	1260
MIN	208	156	159	166	168	168	78	55	55	83	458	465
AC-FT	35700	9880	10490	10830	9610	11330	20680	7300	5650	16310	51820	50350

CAL YR 1989 TOTAL 116678 MEAN 320 MAX 958 MIN 99 AC-FT 231400
WTR YR 1990 TOTAL 120975 MEAN 331 MAX 1260 MIN 55 AC-FT 240000

09057520 BLUE RIVER BELOW SPRUCE CREEK NEAR KREMMLING, CO

LOCATION.--Lat 39°57'49", long 106°21'35", in NW¼SW¼ sec.16, T.1 S., R.80 W., Grand County, Hydrologic Unit 14010002, on right bank 3,400 ft upstream of Camp Creek, 1.4 mi downstream from Spruce Creek, 6.5 mi southeast of Kremmling, 7.7 mi downstream from Green Mountain Reservoir, and 7.8 mi upstream from mouth.

DRAINAGE AREA.--645 mi².

PERIOD OF RECORD.--October 1989 to September 1990.

GAGE.--Water-stage recorder. Elevation of gage is 7,425 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 29 to Feb. 27. Records good except for estimated daily discharges, which are poor. Flow is regulated by Green Mountain Reservoir 7.7 mi upstream and the Trans Mountain Hydro Corporation Diversion 0.5 mi upstream. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,210 ft³/s, Sept. 1, 4, 1990, gage height, 5.25 ft; minimum daily, 11 ft³/s, May 31, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft³/s at 1030 Sept. 1, and at 1930 Sept. 4, gage height, 5.25 ft; minimum daily, 11 ft³/s, May 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	545	229	175	193	191	201	291	191	12	86	246	1180
2	555	217	170	195	191	205	284	191	14	75	336	1170
3	602	191	170	197	190	206	277	194	25	62	373	1160
4	652	191	172	197	189	205	320	240	26	59	373	1150
5	691	190	170	197	189	206	424	267	28	61	373	1080
6	728	190	170	190	190	210	579	267	30	65	419	950
7	793	187	180	186	190	209	649	236	32	62	467	915
8	821	185	180	199	190	200	651	157	32	66	480	925
9	820	196	170	190	190	192	609	73	45	67	496	957
10	824	197	183	190	189	190	559	72	55	141	535	1010
11	780	198	178	190	187	191	563	70	53	225	576	1000
12	740	200	170	190	185	195	564	70	63	224	577	946
13	750	192	183	198	185	199	560	69	62	214	571	844
14	750	183	183	198	189	192	564	71	66	195	529	662
15	750	180	183	195	190	195	567	75	75	172	512	657
16	727	172	183	200	189	197	566	63	86	181	546	654
17	701	173	183	205	186	200	526	26	56	178	604	640
18	674	172	183	198	185	200	408	22	47	174	652	584
19	586	171	183	190	189	196	305	19	30	173	627	512
20	532	171	180	195	186	203	229	18	33	159	619	466
21	532	172	182	195	183	197	176	18	40	143	623	426
22	534	172	188	190	181	199	177	15	40	121	634	344
23	532	173	185	190	181	199	155	12	37	122	630	363
24	511	173	183	198	181	194	115	13	77	123	627	344
25	490	176	187	203	181	198	95	12	90	127	688	310
26	464	175	190	203	185	200	93	12	71	125	735	300
27	448	174	191	203	188	207	96	13	75	124	748	298
28	397	178	191	199	202	256	145	12	78	144	834	293
29	253	170	191	198	---	258	146	13	91	164	1000	284
30	240	170	191	195	---	257	166	12	86	181	1090	283
31	229	---	191	194	---	278	---	11	---	217	1120	---
TOTAL	18651	5518	5619	6061	5252	6435	10859	2534	1555	4230	18640	20707
MEAN	602	184	181	196	188	208	362	81.7	51.8	136	601	690
MAX	824	229	191	205	202	278	651	267	91	225	1120	1180
MIN	229	170	170	186	181	190	93	11	12	59	246	283
AC-FT	36990	10940	11150	12020	10420	12760	21540	5030	3080	8390	36970	41070

WTR YR 1990 TOTAL 106061 MEAN 291 MAX 1180 MIN 11 AC-FT 210400

09058000 COLORADO RIVER NEAR KREMMLING, CO

LOCATION.--Lat 40°02'12", long 106°26'22", in NE¼SW¼ sec.23, T.1 N., R.81 W., Grand County, Hydrologic Unit 14010001, on right bank at upstream end of Gore Canyon, 3.0 mi southwest of Kremmling, and 3.8 mi downstream from Blue River.

DRAINAGE AREA.--2,382 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to September 1918 (published as Grand River near Kremmling), October 1961 to September 1970, October 1971 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,320 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1313 for history of changes prior to Oct. 1, 1961.

REMARKS.--Estimated daily discharges: Nov. 29, Dec. 8 to Jan. 10, and Jan. 21 to Feb. 25. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 40,000 acres upstream from station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--28 years (water years 1962-70, 1972-90), 1,026 ft³/s; 743,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 21,500 ft³/s, June 7, 1912, gage height, 21.8 ft, datum then in use, from rating curve extended above 14,000 ft³/s; minimum observed, 166 ft³/s, Dec. 19, 1907.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,490 ft³/s at 1315 Sept. 4, gage height, 6.65 ft; minimum daily, 310 ft³/s, Jan. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	810	497	399	345	340	355	505	655	711	434	987	1440
2	804	476	344	335	340	366	513	660	654	482	1080	1440
3	809	444	406	325	340	373	554	662	584	608	1110	1430
4	871	455	401	320	340	387	611	709	513	739	1090	1460
5	880	465	421	310	340	385	699	779	494	718	1090	1420
6	902	474	361	320	340	390	841	795	527	584	1100	1290
7	946	471	349	330	340	376	912	815	560	553	1140	1240
8	978	457	340	340	340	363	921	804	546	649	1140	1230
9	983	459	335	350	340	361	927	661	533	844	1170	1230
10	981	473	330	360	340	366	868	604	616	810	1170	1300
11	979	478	340	367	345	386	846	586	634	1070	1230	1320
12	917	474	345	375	350	395	802	607	687	1010	1230	1250
13	915	467	350	378	350	381	845	604	831	898	1220	1180
14	914	453	355	374	345	350	863	591	651	844	1210	1000
15	921	438	350	375	325	360	866	605	725	859	1150	1000
16	954	419	350	370	320	358	914	743	859	865	1180	1020
17	923	442	355	375	320	352	929	612	824	936	1190	1050
18	899	429	355	376	320	370	819	484	762	908	1200	1050
19	838	444	355	372	320	374	755	490	491	932	1200	1010
20	771	443	350	368	325	394	776	596	419	902	1180	929
21	762	440	350	360	330	420	691	579	413	972	1180	902
22	767	441	360	355	330	411	701	496	445	1000	1170	790
23	767	432	370	350	330	441	701	483	439	937	1200	789
24	760	436	380	355	330	444	638	533	462	909	1220	784
25	726	453	385	355	332	432	652	684	456	922	1230	737
26	715	443	390	355	334	436	642	623	381	917	1280	723
27	690	438	400	350	342	456	586	588	387	835	1260	721
28	681	448	385	350	353	507	588	591	399	819	1310	712
29	537	550	370	345	---	509	603	625	456	937	1390	697
30	515	623	365	345	---	492	617	800	411	941	1390	705
31	489	---	355	340	---	488	---	752	---	974	1390	---
TOTAL	25404	13862	11301	10925	9401	12478	22185	19816	16870	25808	37087	31849
MEAN	819	462	365	352	336	403	739	639	562	833	1196	1062
MAX	983	623	421	378	353	509	929	815	859	1070	1390	1460
MIN	489	419	330	310	320	350	505	483	381	434	987	697
AC-FT	50390	27500	22420	21670	18650	24750	44000	39310	33460	51190	73560	63170

CAL YR 1989 TOTAL 251370 MEAN 689 MAX 1470 MIN 310 AC-FT 498600
WTR YR 1990 TOTAL 236986 MEAN 649 MAX 1460 MIN 310 AC-FT 470100

09058000 COLORADO RIVER NEAR KREMMLING, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 08...	1630	446	263	8.1	4.5	10.4	K<1	K<1	100	32	6.0	10
MAR 28...	1730	538	280	8.2	5.0	9.4	K1	K9	110	33	7.4	12
APR 18...	1840	838	251	8.1	11.0	8.2	20	K2	110	33	5.8	9.1
MAY 18...	1320	470	285	8.1	13.5	7.5	K6	K7	120	34	7.6	12
JUN 27...	1700	372	359	8.2	21.5	7.8	38	47	160	47	9.1	16
JUL 24...	1530	921	267	8.0	16.5	7.8	15	14	110	34	6.0	10
SEP 25...	1145	728	214	8.1	13.0	8.1	K5	K5	92	29	4.6	7.1

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
NOV 08...	0.4	2.1	81	44	3.0	0.3	9.7	164	156	0.22	197
MAR 28...	0.5	2.4	78	53	3.5	0.2	8.3	154	168	0.21	224
APR 18...	0.4	1.9	72	39	3.4	0.3	7.8	146	144	0.20	330
MAY 18...	0.5	1.7	79	56	4.0	0.2	11	174	174	0.24	221
JUN 27...	0.6	2.3	128	56	4.4	0.2	15	228	227	0.31	229
JUL 24...	0.4	2.0	92	41	3.5	0.4	12	158	164	0.21	393
SEP 25...	0.3	1.9	69	33	3.8	0.3	7.6	126	129	0.17	248

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
NOV 08...	<0.01	0.30	<0.10	<0.01	<0.01	--	--	0.06	0.04	<0.01	0.02
MAR 28...	<0.01	0.40	0.20	0.05	0.01	0.01	0.35	--	0.05	<0.01	<0.01
APR 18...	<0.01	0.30	0.10	0.04	0.01	0.01	0.26	--	0.07	0.01	<0.01
MAY 18...	<0.01	0.60	<0.10	0.02	0.01	0.01	0.58	--	0.07	0.02	<0.01
JUN 27...	<0.01	2.1	<0.10	0.02	0.02	0.03	2.1	--	0.04	0.01	<0.01
JUL 24...	<0.01	0.30	<0.10	0.02	0.02	0.03	0.28	0.03	0.04	0.02	0.01
SEP 25...	<0.01	<0.20	<0.10	0.03	<0.01	--	--	--	<0.01	<0.01	<0.01

K BASED ON NON-IDEAL COLONY COUNT.

COLORADO RIVER MAIN STEM

09058000 COLORADO RIVER NEAR KREMMLING, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 08...	39	<0.5	<1	<5	<3	<10	12	<10
MAR 28...	42	<0.5	<1	<5	<3	<10	43	<10
APR 18...	42	<0.5	<1	<5	<3	<10	25	<10
MAY 18...	38	<0.5	<1	<5	<3	<10	34	<10
JUN 27...	56	<0.5	1	<5	<3	<10	44	<10
JUL 24...	40	<0.5	<1	<5	<3	<10	28	<10
SEP 25...	45	<0.5	<1	<5	<3	<10	36	<10

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	LITHIUM DIS- SOLVED (UG/L AS LI)
NOV 08...	34	20	<10	<1.0	200	<6	10	11
MAR 28...	36	40	<10	<1.0	220	<6	<3	11
APR 18...	27	40	10	<1.0	200	<6	3	8
MAY 18...	69	10	<10	<1.0	240	<6	<3	12
JUN 27...	100	20	<10	<1.0	320	<6	12	11
JUL 24...	38	20	<10	<1.0	200	<6	27	11
SEP 25...	40	40	<10	<1.0	160	<6	4	6

DRAINAGE AREA.--2,412 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1981 to September 1990 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 6,910 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 10, Dec. 19 to Apr. 6, and Apr. 10 to Apr. 24. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 40,000 acres upstream from station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--9 years, 1,240 ft³/s; 898,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft³/s, probably occurred on May 26, 1984, gage height, 12.91 ft, from highwater mark in well; minimum daily, 306 ft³/s, Dec. 2, 1989.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 1,490 ft³/s at 1400 Sept. 4, gage height, 3.89 ft; minimum daily, 306 ft³/s, Dec. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	810	495	411	345	340	355	505	684	703	421	951	1430
2	806	469	306	335	340	366	513	683	648	471	1030	1430
3	808	436	322	325	340	373	555	693	585	598	1070	1420
4	873	448	316	320	340	387	611	723	507	747	1050	1450
5	874	458	339	320	340	385	699	807	479	723	1050	1420
6	894	471	351	320	340	390	841	821	516	606	1060	1250
7	935	467	318	330	340	376	892	841	561	561	1100	1200
8	964	454	313	340	340	363	915	830	550	629	1090	1180
9	969	454	339	350	340	361	923	675	534	848	1130	1180
10	965	470	338	360	340	366	870	608	611	790	1120	1260
11	965	477	338	367	345	390	850	578	632	1040	1170	1290
12	908	476	313	375	350	390	805	601	679	995	1170	1220
13	908	470	324	380	350	390	845	589	834	897	1160	1160
14	907	447	329	375	345	350	865	584	657	841	1150	982
15	913	438	351	375	325	360	870	589	723	851	1100	966
16	943	404	345	375	320	360	895	724	855	859	1130	980
17	913	438	313	375	320	350	935	612	830	916	1140	1020
18	893	428	358	375	320	370	820	463	774	896	1150	1020
19	836	445	355	370	320	374	760	462	497	915	1150	982
20	768	441	350	370	325	394	780	578	408	893	1130	910
21	761	438	350	360	330	420	695	577	386	944	1140	895
22	766	440	360	355	330	410	710	473	435	976	1130	783
23	768	432	370	350	330	440	710	467	418	921	1140	775
24	761	433	380	355	330	445	640	496	454	898	1160	774
25	721	455	385	355	332	435	688	669	456	904	1160	729
26	712	447	385	355	334	440	674	619	372	906	1230	712
27	683	441	385	350	342	455	636	581	351	829	1190	709
28	680	419	385	350	353	505	613	584	364	800	1250	702
29	530	526	370	345	---	510	637	609	457	916	1340	684
30	512	585	365	345	---	495	641	786	390	916	1370	688
31	482	---	355	340	---	490	---	745	---	942	1360	---
TOTAL	25228	13702	10819	10942	9401	12495	22393	19751	16666	25449	35571	31201
MEAN	814	457	349	353	336	403	746	637	556	821	1147	1040
MAX	969	585	411	380	353	510	935	841	855	1040	1370	1450
MIN	482	404	306	320	320	350	505	462	351	421	951	684
AC-FT	50040	27180	21460	21700	18650	24780	44420	39180	33060	50480	70560	61890
CAL YR 1989	TOTAL 248182 MEAN 680 MAX 1470 MIN 306 AC-FT 492300											
WTR YR 1990	TOTAL 233618 MEAN 640 MAX 1450 MIN 306 AC-FT 463400											

09058030 COLORADO RIVER NEAR RADIUM, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1981 to September 1990 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)
NOV 08...	0930	450	264	8.4	2.5	11.3	K<1	K<1	100	31	5.7	9.8
MAR 28...	1110	530	300	8.3	4.5	11.7	K15	58	120	34	8.3	13
APR 18...	0900	824	244	8.2	6.5	9.7	32	K<1	100	32	5.7	8.7
MAY 16...	1215	763	248	8.3	8.5	9.6	54	73	100	30	6.5	11
JUN 28...	1250	370	382	8.5	19.5	8.6	32	24	160	49	10	17
JUL 23...	1230	--	279	8.5	15.0	8.1	38	25	110	35	6.5	11
SEP 24...	1535	776	210	8.4	14.5	8.0	K7	K7	89	28	4.5	6.8

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)
NOV 08...	0.4	2.0	80	45	3.1	0.3	9.3	165	155	0.22	200	<0.01
MAR 28...	0.5	2.3	80	62	3.9	0.2	8.3	172	181	0.23	246	0.01
APR 18...	0.4	2.0	73	38	3.1	0.2	8.1	142	142	0.19	316	<0.01
MAY 16...	0.5	1.5	74	46	3.7	0.2	11	151	155	0.21	311	<0.01
JUN 28...	0.6	2.2	133	67	4.4	0.2	15	243	245	0.33	243	<0.01
JUL 23...	0.4	2.0	89	45	3.5	0.3	12	167	169	0.23	--	<0.01
SEP 24...	0.3	1.9	68	31	3.7	0.3	7.4	123	125	0.17	258	<0.01

DATE	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV 08...	--	0.30	<0.10	<0.01	<0.01	--	--	0.03	0.02	<0.01	0.01
MAR 28...	0.09	0.30	0.10	0.03	0.01	0.01	0.27	0.03	0.05	<0.01	0.01
APR 18...	--	0.30	0.10	0.03	<0.01	--	0.27	--	0.09	<0.01	<0.01
MAY 16...	--	0.60	<0.10	0.03	<0.01	--	0.57	--	0.09	0.01	<0.01
JUN 28...	--	1.1	<0.10	<0.01	<0.01	--	--	--	0.03	0.01	<0.01
JUL 23...	--	0.70	<0.10	0.03	0.01	0.01	0.67	--	0.04	0.01	<0.01
SEP 24...	--	0.50	<0.10	0.03	<0.01	--	0.47	--	<0.01	<0.01	<0.01

K BASED ON NON-IDEAL COLONY COUNT.

09058030 COLORADO RIVER NEAR RADIUM, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 08...	38	<0.5	<1.0	<5	<3	<10	17	10
MAR 28...	41	<0.5	<1.0	<5	<3	<10	22	<10
APR 18...	41	<0.5	<1.0	<5	<3	<10	130	<10
MAY 16...	34	0.6	<1.0	<5	<3	<10	390	<10
JUN 28...	54	<0.5	<1.0	<5	<3	<10	67	<10
JUL 23...	38	<0.5	<1.0	<5	<3	<10	13	<10
SEP 24...	41	<0.5	<1.0	<5	<3	<10	33	<10

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	LITHIUM DIS- SOLVED (UG/L AS LI)
NOV 08...	33	20	<10	1.0	190	<6	12	10
MAR 28...	33	40	<10	<1.0	230	<6	<3	12
APR 18...	28	40	<10	<1.0	200	<6	12	7
MAY 16...	51	<10	10	<1.0	210	<6	<3	11
JUN 28...	59	20	<10	<1.0	340	<6	5	18
JUL 23...	25	20	<10	1.0	220	<6	3	12
SEP 24...	19	40	<10	<1.0	160	<6	<3	6

09058500 PINEY RIVER BELOW PINEY LAKE, NEAR MINTURN, CO

LOCATION.--Lat 39°42'29", long 106°25'34", Eagle County, Hydrologic Unit 14010001, on left bank 1.4 mi upstream from Dickson Creek, 2.0 mi downstream from Piney Lake, and 8.5 mi north of Minturn.

DRAINAGE AREA.--13.0 mi².

PERIOD OF RECORD.--October 1947 to September 1954, October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 9,145.25 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to October 1963, water-stage recorder at site 15 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Nov. 1 to Apr. 18. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--34 years (1948-54, 1964-90), 24.7 ft³/s; 17,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 560 ft³/s, June 8, 1985, gage height, 5.12 ft; maximum gage height observed, 6.44 ft, Apr. 13, 1977; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	0400	207	4.35	June 6	0300	*362	*4.71

Minimum daily discharge, 1.4 ft³/s, Feb. 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.9	2.4	1.7	1.6	1.7	2.5	12	74	61	9.7	2.9
2	2.3	2.7	2.6	1.7	1.5	1.7	2.8	11	56	52	11	2.8
3	2.2	3.0	2.5	1.7	1.5	1.8	3.3	11	55	50	10	2.9
4	2.3	3.7	2.7	1.7	1.6	1.9	4.2	12	128	58	8.5	2.9
5	2.7	3.3	2.9	1.6	1.7	2.0	4.2	13	256	52	7.5	2.9
6	2.7	2.9	3.1	1.6	1.7	1.9	4.2	21	275	53	6.8	3.6
7	2.5	2.9	2.8	1.6	1.6	1.7	4.5	38	261	45	6.0	4.1
8	2.3	2.9	2.5	1.7	1.5	1.7	5.4	32	253	106	5.7	3.7
9	2.3	3.1	2.5	1.7	1.5	1.7	5.9	22	266	90	5.1	3.5
10	2.1	3.4	2.5	1.7	1.6	1.8	5.0	22	252	62	4.5	3.2
11	2.1	3.3	2.5	1.6	1.5	1.8	5.2	32	228	49	4.3	3.0
12	2.1	3.3	2.3	1.6	1.5	1.8	6.0	24	226	39	4.2	2.8
13	2.0	3.5	2.1	1.6	1.5	1.8	5.6	18	139	31	4.5	2.6
14	1.9	3.5	2.1	1.7	1.5	1.8	5.6	16	205	32	4.4	2.5
15	2.0	3.2	2.2	1.6	1.5	1.7	8.0	20	164	29	4.4	2.4
16	2.5	2.9	2.2	1.6	1.4	1.7	13	18	115	24	5.0	2.3
17	2.8	2.9	2.2	1.5	1.4	1.7	16	15	107	21	5.9	2.9
18	2.8	3.2	2.2	1.5	1.5	1.7	16	18	126	20	7.0	6.4
19	4.7	2.9	2.2	1.5	1.6	1.7	18	18	141	35	7.8	6.3
20	2.6	2.9	2.2	1.5	1.6	1.7	20	17	119	25	6.9	5.5
21	2.5	2.9	2.1	1.6	1.7	1.8	29	18	116	31	5.6	4.7
22	2.8	2.9	2.0	1.7	1.7	2.0	34	42	111	27	5.3	4.2
23	2.8	2.9	2.0	1.6	1.6	2.3	39	64	114	21	4.9	3.8
24	2.8	2.9	2.0	1.6	1.6	2.1	34	104	117	17	4.5	3.6
25	2.8	3.2	2.1	1.5	1.6	2.1	26	121	102	28	4.1	3.4
26	2.8	3.2	2.0	1.5	1.7	2.3	21	122	104	26	3.8	3.6
27	3.5	2.9	1.9	1.5	1.9	2.6	17	91	104	19	3.5	4.2
28	3.0	2.6	1.9	1.5	1.8	2.5	14	121	93	15	3.2	4.2
29	3.2	2.4	1.9	1.5	---	2.4	12	160	82	13	3.1	4.9
30	2.8	2.2	1.8	1.5	---	2.4	12	74	68	11	3.0	5.5
31	2.6	---	1.8	1.6	---	2.4	---	75	---	10	3.0	---
TOTAL	80.8	90.5	70.2	49.5	44.4	60.2	393.4	1382	4457	1152	173.2	111.3
MEAN	2.61	3.02	2.26	1.60	1.59	1.94	13.1	44.6	149	37.2	5.59	3.71
MAX	4.7	3.7	3.1	1.7	1.9	2.6	39	160	275	106	11	6.4
MIN	1.9	2.2	1.8	1.5	1.4	1.7	2.5	11	55	10	3.0	2.3
AC-FT	160	180	139	98	88	119	780	2740	8840	2280	344	221

CAL YR 1989 TOTAL 6491.9 MEAN 17.8 MAX 139 MIN 1.0 AC-FT 12880
WTR YR 1990 TOTAL 8064.5 MEAN 22.1 MAX 275 MIN 1.4 AC-FT 16000

09058610 DICKSON CREEK NEAR VAIL, CO

LOCATION.--Lat 39°42'14", long 106°27'25", Eagle County, Hydrologic Unit 14010001, on right bank 0.6 mi upstream from Freeman Creek, 1.0 mi upstream from mouth, and 6 mi northwest of Vail.

DRAINAGE AREA.--3.41 mi².

PERIOD OF RECORD.--October 1971 to current year. Prior to October 1972, published as "near Minturn."

GAGE.--Water-stage recorder. Elevation of gage is 9,245 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-12, Nov. 25 to Dec. 6, and Dec. 12 to Mar. 18. Records fair except for estimated daily discharges, which are poor. Diversion by Willy N. ditch 75 ft upstream for irrigation of hay meadows downstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--19 years, 2.13 ft³/s; 1,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48 ft³/s, May 6, 1979, gage height, 2.75 ft; maximum gage height, 4.89 ft, May 9, 1984 (backwater from ice); no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16 ft³/s at 2100 May 23, gage height, 2.79 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	.00	.52	.68	.60	.64	1.0	1.4	5.3	3.6	1.0	1.3
2	.42	.12	.54	.66	.58	.62	1.1	1.5	7.3	3.5	1.4	1.3
3	.40	.07	.52	.64	.56	.66	1.1	1.5	6.8	3.4	1.6	1.2
4	.54	.00	.56	.64	.64	.70	1.3	1.6	6.7	3.9	1.7	1.2
5	.50	.00	.58	.60	.68	.74	1.3	2.2	8.3	3.2	3.2	1.3
6	.48	.00	.56	.58	.68	.74	1.3	3.1	8.7	3.0	2.5	1.9
7	.45	.00	.54	.62	.66	.74	1.3	3.9	13	2.9	1.5	.99
8	.44	.00	.51	.64	.64	.66	1.3	3.7	14	4.2	1.4	1.2
9	.43	.00	.51	.66	.70	.64	1.5	3.2	12	3.2	1.3	1.2
10	.46	.33	.51	.68	.74	.62	1.2	3.6	11	2.9	1.9	1.1
11	.45	.96	.59	.64	.72	.64	1.2	4.0	11	2.8	1.8	1.1
12	.44	.92	.56	.62	.70	.66	1.2	3.5	11	2.4	1.5	1.1
13	.18	.80	.54	.62	.70	.66	1.2	3.4	8.9	2.0	1.5	1.1
14	.00	.83	.58	.68	.72	.70	1.2	3.5	8.2	2.1	1.8	1.2
15	.00	.94	.64	.70	.72	.66	1.8	4.3	7.7	1.9	1.3	1.2
16	.00	1.0	.60	.64	.66	.60	2.0	3.7	6.0	1.7	1.4	1.2
17	.00	1.1	.72	.58	.68	.58	1.9	3.5	6.3	1.7	1.6	2.2
18	.00	1.0	.66	.58	.68	.55	1.6	4.0	5.4	1.8	1.5	2.1
19	.00	1.0	.72	.60	.64	.54	1.8	3.9	4.6	2.1	1.5	1.6
20	.00	.35	.70	.60	.68	.64	1.9	4.2	4.3	1.7	1.4	1.5
21	.00	.07	.66	.64	.66	.83	2.0	5.2	3.9	2.1	1.3	1.4
22	.00	.07	.62	.64	.64	.88	2.4	6.2	4.1	1.8	1.4	1.4
23	.00	.07	.62	.58	.60	.99	2.8	7.2	4.2	1.6	1.4	1.3
24	.00	.23	.66	.66	.62	.83	2.7	7.9	4.5	1.7	1.4	1.3
25	.00	.72	.70	.62	.66	.80	2.5	7.6	4.3	2.9	1.4	1.3
26	.00	.76	.66	.64	.70	.91	2.1	7.1	4.5	1.6	1.3	1.4
27	.00	.74	.62	.60	.74	1.0	1.6	11	3.9	1.3	1.2	1.3
28	.00	.70	.66	.56	.68	1.0	1.6	8.2	4.3	1.1	1.2	1.4
29	.00	.64	.72	.58	---	1.0	1.6	7.0	4.4	1.1	1.2	1.4
30	.00	.58	.68	.60	---	.97	1.5	6.0	3.8	1.0	1.2	1.5
31	.00	---	.72	.64	---	.95	---	5.4	---	.94	1.3	---
TOTAL	5.61	14.00	18.98	19.42	18.68	23.15	49.0	142.5	208.4	71.14	47.1	40.69
MEAN	.18	.47	.61	.63	.67	.75	1.63	4.60	6.95	2.29	1.52	1.36
MAX	.54	1.1	.72	.70	.74	1.0	2.8	11	14	4.2	3.2	2.2
MIN	.00	.00	.51	.56	.56	.54	1.0	1.4	3.8	.94	1.0	.99
AC-FT	11	28	38	39	37	46	97	283	413	141	93	81

CAL YR 1989 TOTAL 325.78 MEAN .89 MAX 4.5 MIN .00 AC-FT 646
WTR YR 1990 TOTAL 658.67 MEAN 1.80 MAX 14 MIN .00 AC-FT 1310

09058700 FREEMAN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°41'54", long 106°26'42", Eagle County, Hydrologic Unit 14010001, on right bank 0.8 mi upstream from mouth and 7.5 mi north of Minturn.

DRAINAGE AREA.--2.94 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,335 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 20 to Apr. 17. Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 1.33 ft³/s; 964 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82 ft³/s, May 25, 1984, gage height, 2.21 ft, maximum gage height, 3.51 ft, May 18, 1973 (backwater from ice); no flow for some days some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 22	1800	*16	*1.92				

Minimum daily, 0.01 ft³/s, Aug. 26-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	.10	.11	.11	.12	.24	.87	3.6	.55	.17	.04
2	.20	.18	.11	.11	.09	.13	.26	.83	4.0	.55	.17	.03
3	.19	.17	.12	.10	.09	.14	.29	.81	3.6	.60	.17	.02
4	.40	.18	.12	.09	.09	.15	.30	.75	3.7	.78	.15	.07
5	.33	.20	.13	.08	.10	.15	.30	.83	3.9	.49	.13	.15
6	.29	.20	.14	.08	.10	.15	.30	1.5	3.9	.52	.13	.28
7	.27	.19	.12	.09	.10	.13	.34	1.9	3.6	.78	.11	.15
8	.24	.17	.11	.10	.09	.14	.40	1.4	3.3	1.1	.10	.13
9	.24	.17	.12	.12	.08	.15	.45	1.3	3.1	.83	.08	.11
10	.25	.19	.11	.12	.09	.16	.41	2.0	2.9	.60	.05	.10
11	.24	.17	.10	.12	.09	.16	.38	1.5	2.6	.51	.04	.11
12	.22	.16	.10	.12	.10	.16	.33	1.1	3.6	.40	.05	.14
13	.24	.16	.10	.12	.10	.15	.35	1.2	2.4	.38	.05	.13
14	.25	.15	.11	.11	.09	.14	.35	2.0	2.0	.45	.05	.09
15	.27	.14	.12	.11	.09	.14	.40	1.3	1.8	.41	.06	.08
16	.41	.15	.12	.11	.10	.14	.50	.88	1.6	.36	.07	.09
17	.39	.17	.12	.11	.11	.15	.65	1.1	1.3	.35	.13	.19
18	.39	.17	.12	.10	.11	.16	.85	1.4	1.2	.42	.12	.19
19	.39	.17	.11	.10	.10	.19	1.1	1.7	1.2	.46	.09	.17
20	.36	.17	.10	.10	.10	.20	1.1	2.4	1.1	.39	.05	.16
21	.39	.16	.10	.11	.11	.20	1.2	5.0	1.0	.45	.04	.13
22	.42	.15	.10	.10	.13	.23	1.5	6.6	.95	.33	.04	.12
23	.39	.15	.10	.10	.13	.27	2.1	6.6	.87	.30	.04	.12
24	.31	.15	.12	.10	.13	.24	2.0	6.2	.80	.27	.03	.11
25	.31	.15	.13	.09	.14	.22	1.6	4.8	.83	.41	.02	.09
26	.26	.15	.12	.10	.14	.22	1.2	4.1	.76	.27	.01	.07
27	.26	.14	.12	.10	.13	.24	1.1	3.6	.65	.21	.01	.06
28	.20	.12	.12	.11	.12	.26	1.0	3.8	.58	.18	.01	.05
29	.19	.10	.12	.12	---	.24	.93	5.1	.56	.17	.01	.08
30	.18	.10	.12	.13	---	.23	.91	4.4	.52	.15	.01	.11
31	.18	---	.11	.13	---	.21	---	4.0	---	.15	.06	---
TOTAL	8.86	4.83	3.54	3.29	2.96	5.57	22.84	80.97	61.92	13.82	2.25	3.37
MEAN	.29	.16	.11	.11	.11	.18	.76	2.61	2.06	.45	.073	.11
MAX	.42	.20	.14	.13	.14	.27	2.1	6.6	4.0	1.1	.17	.28
MIN	.18	.10	.10	.08	.08	.12	.24	.75	.52	.15	.01	.02
AC-FT	18	9.6	7.0	6.5	5.9	11	45	161	123	27	4.5	6.7

CAL YR 1989 TOTAL 275.55 MEAN .75 MAX 13 MIN .06 AC-FT 547
WTR YR 1990 TOTAL 214.22 MEAN .59 MAX 6.6 MIN .01 AC-FT 425

09058800 EAST MEADOW CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°43'54", long 106°25'34", Eagle County, Hydrologic Unit 14010001, on left bank 1.4 mi upstream from mouth and 10 mi north of Minturn.

DRAINAGE AREA.--3.61 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,455 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 23 to Apr. 18, Apr. 22-24, and Apr. 29 to May 2. Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 4.35 ft³/s; 3,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81 ft³/s, June 30, 1984, gage height, 1.71 ft, but may have been higher during period of no gage height record May 11 to June 26, 1984; maximum gage height, 2.22 ft, May 12, 1970 (backwater from ice); minimum daily discharge, 0.32 ft³/s, Jan. 7, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34 ft³/s at 1700 June 5, gage height, 1.45 ft; minimum daily, 0.56 ft³/s, Nov. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.87	.82	.58	.64	.70	.62	.70	1.5	16	4.9	1.7	.71
2	.86	.76	.62	.62	.66	.62	.70	1.5	15	4.2	2.0	.71
3	.95	.70	.64	.66	.68	.66	.76	1.5	18	4.1	1.8	.79
4	1.0	.70	.68	.68	.74	.66	.78	1.6	23	4.4	1.6	.71
5	1.1	.74	.72	.66	.70	.64	.82	1.7	27	3.9	1.5	.85
6	.89	.74	.72	.60	.68	.70	.86	2.7	27	3.9	1.5	.78
7	1.0	.70	.68	.62	.66	.64	.84	3.5	27	4.0	1.4	.80
8	1.0	.66	.72	.66	.62	.62	.88	3.2	27	6.9	1.4	.68
9	1.0	.68	.72	.72	.66	.62	.92	2.7	26	5.1	1.3	.73
10	.95	.74	.74	.72	.66	.64	.88	3.3	26	3.9	1.3	.60
11	.95	.76	.70	.68	.66	.66	.88	3.6	25	3.5	1.3	.60
12	.80	.70	.70	.66	.66	.66	.94	2.9	25	3.0	1.2	.60
13	.88	.68	.66	.66	.66	.64	.92	2.8	23	2.8	1.1	.60
14	.88	.66	.72	.68	.66	.60	.94	3.5	22	3.1	1.1	.60
15	1.0	.60	.72	.66	.62	.60	1.0	3.9	21	2.7	1.2	.60
16	1.1	.64	.70	.66	.60	.60	1.1	3.1	20	2.5	1.1	.60
17	1.1	.68	.70	.62	.66	.60	1.2	3.0	18	2.3	1.5	1.4
18	.95	.68	.66	.60	.68	.58	1.3	3.5	17	2.9	1.3	1.0
19	.95	.68	.72	.62	.62	.60	1.4	3.5	16	3.0	1.4	.92
20	1.0	.68	.70	.66	.62	.62	1.6	3.8	15	3.1	1.2	.85
21	1.1	.68	.70	.64	.62	.66	2.3	6.0	13	3.9	1.0	.80
22	.90	.66	.70	.68	.62	.68	2.3	8.7	12	2.9	.98	.76
23	1.0	.66	.70	.68	.62	.74	2.4	12	11	2.5	.95	.72
24	.92	.68	.70	.68	.62	.78	2.4	16	10	2.3	.92	.73
25	.90	.72	.66	.64	.62	.76	2.1	17	9.7	4.0	.88	.69
26	.90	.72	.64	.68	.64	.78	1.9	17	8.8	2.6	.87	.75
27	.86	.66	.64	.72	.64	.78	1.7	17	7.6	2.2	.84	.73
28	.86	.60	.66	.68	.64	.78	1.6	20	6.9	2.0	.80	.75
29	.88	.56	.70	.70	---	.76	1.6	21	6.0	1.9	.78	.82
30	.80	.57	.68	.72	---	.72	1.6	17	5.3	1.8	.75	.80
31	.84	---	.70	.70	---	.70	---	18	---	1.8	.76	---
TOTAL	29.19	20.51	21.28	20.60	18.22	20.72	39.32	226.5	524.3	102.1	37.43	22.68
MEAN	.94	.68	.69	.66	.65	.67	1.31	7.31	17.5	3.29	1.21	.76
MAX	1.1	.82	.74	.72	.74	.78	2.4	21	27	6.9	2.0	1.4
MIN	.80	.56	.58	.60	.60	.58	.70	1.5	5.3	1.8	.75	.60
AC-FT	58	41	42	41	36	41	78	449	1040	203	74	45

CAL YR 1989 TOTAL 993.79 MEAN 2.72 MAX 21 MIN .38 AC-FT 1970
WTR YR 1990 TOTAL 1082.85 MEAN 2.97 MAX 27 MIN .56 AC-FT 2150

09059500 PINEY RIVER NEAR STATE BRIDGE, CO

LOCATION.--Lat 39°48'00", long 106°35'00", in SW¼NE¼ sec.16, T.3 S., R.82 W., Eagle County, Hydrologic Unit 14010001, on left bank at downstream side of private bridge at 1.2 mi downstream from Rock Creek, and 6.0 mi southeast of State Bridge.

DRAINAGE AREA.--86.2 mi².

PERIOD OF RECORD.--May 1944 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,272.35 ft above National Geodetic Vertical Datum of 1929. Prior to July 29, 1944, nonrecording gage, and July 29, 1944, to Oct. 24, 1947, water-stage recorder, at datum 2.38 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 16-24, Nov. 26 to Mar. 15, 17. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 400 acres of hay meadows upstream and downstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--46 years, 75.5 ft³/s; 54,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,300 ft³/s, May 25, 1984 (occurred during a period of no gage-height record); maximum recorded discharge, 1,220 ft³/s, June 27, 1983, gage height, 5.82 ft, (from peak stage indicator), but may have been higher May 25, 1984; minimum daily, 1.9 ft³/s, Sept. 1, 18, 19, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 520 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 6	0745	*501	*4.85				

Minimum daily, 8.1 ft³/s, Oct. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	9.0	13	11	11	17	40	226	84	24	12
2	10	9.4	9.8	12	10	11	18	40	196	77	24	12
3	10	12	9.4	12	10	12	20	42	204	72	25	12
4	11	14	11	12	11	13	24	45	295	78	24	13
5	12	13	12	11	12	14	24	50	436	72	22	13
6	11	12	14	10	12	14	24	76	452	72	21	16
7	11	11	13	10	11	13	26	115	430	65	19	16
8	11	11	12	11	10	13	29	112	421	110	18	13
9	10	13	13	12	10	13	30	88	415	100	17	13
10	9.9	13	14	12	12	13	25	89	391	81	16	13
11	9.8	12	14	11	11	14	26	109	351	71	15	12
12	9.8	12	13	11	11	14	27	93	370	59	16	11
13	9.8	13	12	11	10	14	26	85	264	52	16	11
14	9.8	12	13	12	11	15	25	87	291	51	16	10
15	10	11	14	11	11	14	35	108	258	50	16	9.8
16	13	11	13	11	10	15	47	98	209	43	16	9.8
17	13	11	15	10	11	15	55	86	184	41	19	14
18	12	12	14	9.4	12	15	55	97	188	39	22	21
19	9.6	11	15	10	11	16	57	96	197	51	23	19
20	12	11	14	10	11	16	59	102	173	47	19	17
21	13	11	13	9.4	12	17	72	118	163	54	17	15
22	13	11	13	11	11	18	86	164	152	48	16	14
23	13	11	13	9.8	11	20	100	225	150	41	16	13
24	12	11	13	11	11	19	98	300	151	36	15	12
25	12	12	14	9.6	11	19	83	296	137	47	14	12
26	12	12	12	11	12	20	70	290	129	46	13	12
27	11	11	12	10	13	22	56	257	123	37	13	12
28	11	10	13	10	12	20	50	283	114	33	12	13
29	9.4	9.0	14	10	---	18	47	305	104	31	12	13
30	8.1	8.4	13	11	---	18	45	230	93	28	11	15
31	9.0	---	14	11	---	17	---	230	---	25	12	---
TOTAL	339.2	341.8	398.2	335.2	311	483	1356	4356	7267	1741	539	398.6
MEAN	10.9	11.4	12.8	10.8	11.1	15.6	45.2	141	242	56.2	17.4	13.3
MAX	13	14	15	13	13	22	100	305	452	110	25	21
MIN	8.1	8.4	9.0	9.4	10	11	17	40	93	25	11	9.8
AC-FT	673	678	790	665	617	958	2690	8640	14410	3450	1070	791

CAL YR 1989 TOTAL 17608.4 MEAN 48.2 MAX 362 MIN 8.1 AC-FT 34930
WTR YR 1990 TOTAL 17866.0 MEAN 48.9 MAX 452 MIN 8.1 AC-FT 35440

09060550 ROCK CREEK AT CRATER, CO

LOCATION.--Lat 39°58'42", long 106°42'34", in NW¼NE¼ sec. 17, T.1 S., R.83 W., Routt County, Hydrologic Unit 14010001, on right bank 250 ft downstream from county bridge crossing, 2 miles downstream from Kayser Mutual Ditch diversion and 0.8 miles northwest of Crater, Colorado.

DRAINAGE AREA.--72.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,185 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of approximately 1,025 acres upstream from station.

AVERAGE DISCHARGE. --6 years, 32.8 ft³/s; 23,760 acre-ft/year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 422 ft³/s, May 6, 1985, gage height, 3.97 ft, but may have been higher during period of no gage-height record May 7-14, 1985; minimum daily, 1.2 ft³/s, Aug. 15, 27-30, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 24	2400	*160	*3.27	No other peak greater than base discharge.			
Minimum daily, 1.2 ft ³ /s, Aug. 15, 27-30.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	8.2	8.8	9.2	7.7	8.4	13	42	80	2.1	1.8	1.4
2	4.7	5.3	8.9	9.0	7.7	8.9	16	42	73	2.0	1.7	1.4
3	4.7	7.3	8.6	9.0	7.7	8.8	22	42	68	1.9	1.6	1.4
4	4.7	9.5	8.6	9.0	7.7	8.8	29	39	64	2.9	1.6	1.9
5	4.7	8.9	8.8	9.0	7.7	8.8	32	41	60	2.5	1.6	1.9
6	4.6	8.5	9.0	9.0	7.7	8.8	33	49	52	2.1	1.5	1.8
7	4.4	8.2	9.1	9.0	7.7	8.3	37	70	48	2.1	1.5	1.8
8	4.2	8.0	9.3	9.0	7.7	8.5	40	75	42	2.6	1.5	1.8
9	4.1	8.4	9.3	9.0	7.7	8.5	40	64	38	7.7	1.5	1.8
10	4.0	8.8	9.4	8.8	7.7	8.5	33	61	36	4.7	1.4	1.8
11	4.0	8.5	9.6	8.8	7.7	8.5	40	71	36	2.6	1.4	1.7
12	4.0	8.6	9.8	8.8	7.7	8.5	48	66	58	2.0	1.4	1.6
13	4.0	8.7	9.9	8.8	7.7	8.5	46	63	45	1.9	1.4	1.6
14	4.0	8.3	9.9	8.8	7.7	8.7	49	64	28	2.3	1.3	1.7
15	4.1	7.3	9.9	8.8	7.7	8.8	71	74	22	8.0	1.2	1.8
16	6.3	6.3	9.7	8.8	7.7	8.8	82	67	20	2.8	2.9	1.8
17	6.0	10	9.6	8.7	7.7	8.8	80	60	19	2.8	2.6	2.3
18	4.7	7.7	9.6	8.5	7.7	9.0	79	60	15	2.5	2.3	6.8
19	3.8	8.6	9.6	8.5	7.7	8.9	85	62	10	2.0	1.9	3.6
20	3.6	9.1	9.6	8.5	7.7	9.3	82	71	10	2.3	1.5	2.6
21	3.6	9.2	9.6	8.5	7.7	9.3	87	77	9.6	3.0	1.4	2.3
22	3.6	8.7	9.6	8.5	7.7	9.7	94	88	8.4	2.3	1.4	2.3
23	3.6	7.7	9.6	8.4	7.6	10	93	101	7.8	1.9	1.4	2.1
24	3.6	8.4	9.5	8.0	7.5	11	81	119	7.2	1.8	1.4	2.1
25	3.6	9.0	9.3	8.0	7.5	12	82	122	6.6	2.5	1.4	2.4
26	3.6	9.0	9.3	7.7	7.5	13	72	113	6.6	6.0	1.3	2.5
27	5.1	8.7	9.3	7.7	7.5	13	57	99	6.6	2.4	1.2	2.5
28	9.7	8.3	9.3	7.7	7.5	13	60	95	4.7	2.0	1.2	2.5
29	7.9	6.8	9.3	7.7	---	14	52	100	2.3	2.0	1.2	2.6
30	8.8	8.0	9.3	7.7	---	13	46	88	2.1	1.9	1.2	3.1
31	7.1	---	9.3	7.7	---	12	---	83	---	1.8	1.3	---
TOTAL	149.5	248.0	290.4	264.6	214.5	304.1	1681	2268	885.9	87.4	48.0	66.9
MEAN	4.82	8.27	9.37	8.54	7.66	9.81	56.0	73.2	29.5	2.82	1.55	2.23
MAX	9.7	10	9.9	9.2	7.7	14	94	122	80	8.0	2.9	6.8
MIN	3.6	5.3	8.6	7.7	7.5	8.3	13	39	2.1	1.8	1.2	1.4
AC-FT	297	492	576	525	425	603	3330	4500	1760	173	95	133

CAL YR 1989 TOTAL 9947.6 MEAN 27.3 MAX 203 MIN 3.6 AC-FT 19730
WTR YR 1990 TOTAL 6508.3 MEAN 17.8 MAX 122 MIN 1.2 AC-FT 12910

09060550 ROCK CREEK AT CRATER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1984 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1986 to September 1987.

WATER TEMPERATURES: April 1986 to September 1987.

INSTRUMENTATION.--Water-quality monitor April 1986 to September 1987.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office. Water-quality monitor was not operated during winter.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 187 microsiemens Aug. 28, 1986; minimum, 46 microsiemens several days during May and June 1986.

WATER TEMPERATURE: Maximum, 18.9°C July 26, 1987; minimum, 0.0°C many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 14...	1030	4.6	145	--	2.5	10.8	58	17	3.8	3.7	0.2	0.8
MAR 20...	1330	9.7	136	8.4	2.0	11.4	65	19	4.2	4.1	0.2	0.9
MAY 15...	1100	76	67	7.4	6.0	9.8	29	8.8	1.8	2.5	0.2	0.6
AUG 21...	1440	1.4	189	8.1	16.0	7.9	92	27	6.0	4.6	0.2	1.4

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
NOV 14...	55	12	1.4	0.10	13	85	0.12	1.05	<0.01	--	<0.10	--
MAR 20...	59	10	0.5	0.20	14	88	0.12	2.31	<0.01	--	<0.10	--
MAY 15...	27	3.4	0.4	0.10	11	45	0.06	9.28	<0.01	<0.01	<0.10	<0.10
AUG 21...	85	12	0.9	<0.10	12	115	0.16	0.43	<0.01	--	<0.10	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS, (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTH TOTAL (MG/L AS P)	PHOS- PHORUS ORTH DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
NOV 14...	<0.01	--	--	--	<0.20	--	0.01	--	<0.01	--	1.8	2.2
MAR 20...	0.02	--	--	--	<0.20	--	0.01	--	0.01	--	1.7	2.0
MAY 15...	0.01	0.01	0.29	0.39	0.30	0.40	0.03	0.01	0.01	<0.01	6.4	6.0
AUG 21...	0.03	--	0.17	--	0.20	--	0.03	--	0.01	--	2.3	2.2

09060550 ROCK CREEK AT CRATER, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 14...	1030	--	--	--	--	--	<10	--	--	--	--
MAR 20...	1330	--	--	--	--	--	<10	--	--	--	--
MAY 15...	1100	310	<1	<100	<10	<10	<10	<1	2	1	4
AUG 21...	1440	--	--	--	--	--	10	--	--	--	--

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
NOV 14...	--	130	--	--	--	--	--	--	--	--	--
MAR 20...	--	140	--	--	--	--	--	--	--	--	--
MAY 15...	540	200	2	30	0.10	1	1	<1	<1	60	<10
AUG 21...	--	25	--	--	--	--	--	--	--	--	--

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 11...	0945	4.0	165	6.5	JUN 05...	1455	56	85	14.5
DEC 12...	0935	9.9	148	2.5	26...	1425	6.7	137	12.0
JAN 30...	1130	7.7	150	1.0	JUL 31...	1330	1.8	204	15.0
APR 18...	1230	68	87	4.5	SEP 25...	1410	2.5	222	12.0

09060770 ROCK CREEK AT MCCOY, CO

LOCATION.--Lat 39°54'44", long 106°43'30", in SE¼NE¼ sec.6, T.2 S., R.83 W., Eagle County, Hydrologic Unit 14010001, on right bank 1,900 ft downstream from bridge on State Highway 131 and 0.25 mi south of McCoy.

DRAINAGE AREA.--198 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1983 (measurements only), October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,660 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1989, at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Nov. 2-14, Nov. 28 to Feb. 10, 14-21. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of approximately 5,000 acres upstream from station.

AVERAGE DISCHARGE.--7 years, 74.7 ft³/s; 54,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,760 ft³/s, May 16, 1984, gage height, 4.74 ft, datum then in use from outside highwater-mark; minimum daily, 1.5 ft³/s, July 1, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 25	0300	*175	*2.52				

Minimum daily, 1.5 ft³/s, July 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	18	16	20	19	17	55	74	88	1.5	6.4	5.4
2	13	15	16	20	19	18	74	68	89	2.1	7.0	4.9
3	11	18	16	20	18	17	108	64	83	7.0	6.7	6.8
4	12	20	16	20	18	17	93	63	77	11	4.6	8.1
5	14	20	15	20	18	18	77	60	69	13	3.8	7.8
6	12	19	16	20	18	18	72	64	58	12	3.9	9.2
7	12	18	16	20	19	18	71	79	49	12	3.9	8.7
8	13	18	16	20	19	18	69	91	45	12	3.5	8.4
9	14	19	17	20	18	18	74	79	41	19	3.1	5.2
10	14	20	17	20	18	19	63	71	45	18	2.9	3.3
11	15	20	18	19	16	19	65	83	44	15	2.9	2.8
12	15	20	19	19	17	19	72	80	59	12	4.2	2.5
13	14	20	19	20	16	19	71	79	59	10	5.2	2.5
14	14	18	20	20	18	20	68	76	42	11	4.4	3.4
15	14	16	19	20	18	19	92	94	30	17	3.6	4.0
16	18	18	19	21	19	19	106	100	25	13	4.5	3.5
17	18	22	19	20	19	19	119	89	25	11	6.5	5.0
18	15	21	19	20	18	20	105	86	22	6.8	7.4	10
19	15	23	19	20	19	19	110	86	16	5.1	6.3	9.2
20	14	21	19	21	19	20	103	93	14	7.1	5.3	7.3
21	14	25	19	21	19	22	112	91	13	11	4.6	6.1
22	15	21	19	21	16	24	115	99	11	14	4.5	5.8
23	15	23	19	21	18	26	116	115	9.0	13	6.4	5.8
24	15	20	19	20	18	31	114	124	6.3	9.2	6.8	5.5
25	14	19	20	20	17	36	121	132	5.9	8.4	6.6	5.4
26	14	19	20	19	17	51	123	126	5.0	12	5.1	5.6
27	15	17	20	20	17	59	92	114	5.0	7.6	3.2	5.6
28	20	19	20	20	16	56	91	102	4.7	5.8	4.4	5.6
29	18	14	20	20	---	53	81	104	2.8	5.5	4.7	6.9
30	18	15	21	20	---	47	79	95	1.9	5.8	4.6	7.5
31	17	---	20	19	---	45	---	87	---	5.8	5.0	---
TOTAL	455	576	568	621	501	821	2711	2768	1044.6	313.7	152.0	177.8
MEAN	14.7	19.2	18.3	20.0	17.9	26.5	90.4	89.3	34.8	10.1	4.90	5.93
MAX	20	25	21	21	19	59	123	132	89	19	7.4	10
MIN	11	14	15	19	16	17	55	60	1.9	1.5	2.9	2.5
AC-FT	902	1140	1130	1230	994	1630	5380	5490	2070	622	301	353

CAL YR 1989 TOTAL 16690.0 MEAN 45.7 MAX 296 MIN 6.6 AC-FT 33100
WTR YR 1990 TOTAL 10709.1 MEAN 29.3 MAX 132 MIN 1.5 AC-FT 21240

09060770 ROCK CREEK AT MCCOY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- December 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV 14...	1320	18	335	8.2	2.5	11.1	150	42	12	11
MAR 20...	0945	20	338	7.8	2.0	12.4	160	44	12	12
MAY 15...	1345	92	165	7.9	9.0	9.6	67	19	4.8	4.9
AUG 21...	1220	5.1	420	8.2	17.0	8.6	190	50	15	19

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L CAC03)	SULFATE DIS-SOLVED (MG/L AS S04)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L SI02)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
NOV 14...	0.4	3.9	144	35	1.9	0.20	15	207	0.28
MAR 20...	0.4	2.8	142	41	6.4	0.30	16	220	0.30
MAY 15...	0.3	1.6	64	16	0.9	0.10	12	98	0.13
AUG 21...	0.6	7.6	180	42	4.3	0.60	13	260	0.35

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
NOV 14...	9.80	0.01	--	0.10	--	0.02	--	0.28	--
MAR 20...	11.8	<0.01	--	0.10	--	0.02	--	0.28	--
MAY 15...	24.4	<0.01	<0.01	<0.10	<0.10	0.01	0.02	0.29	0.38
AUG 21...	3.60	<0.01	--	<0.10	--	0.04	--	0.26	--

DATE	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
NOV 14...	0.30	--	0.40	0.02	--	0.01	--	2.8	2.9
MAR 20...	0.30	--	0.40	<0.01	--	0.01	--	2.9	3.1
MAY 15...	0.30	0.40	--	0.03	0.04	0.01	<0.01	6.5	5.7
AUG 21...	0.30	--	--	0.02	--	0.02	--	3.6	3.6

ROCK CREEK BASIN

09060770 ROCK CREEK AT MCCOY, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 14...	1320	--	--	--	--	--	20	--	--	--	--
MAR 20...	0945	--	--	--	--	--	30	--	--	--	--
MAY 15...	1345	310	<1	<100	<10	20	10	<1	2	1	2
AUG 21...	1220	--	--	--	--	--	50	--	--	--	--

DATE	TIME	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
NOV 14...	--	--	62	--	--	--	--	--	--	--	--	--
MAR 20...	--	--	66	--	--	--	--	--	--	--	--	--
MAY 15...	520	150	1	30	0.10	2	1	<1	<1	130	<10	--
AUG 21...	--	--	23	--	--	--	--	--	--	--	--	--

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 11...	1115	15	372	7.5	JUN 05...	1310	66	136	15.0
DEC 12...	1105	18	368	0.0	26...	1255	5.8	388	20.0
JAN 30...	0940	20	332	0.0	JUL 31...	1150	6.1	422	17.0
APR 18...	1415	100	207	9.5	SEP 25...	1135	5.6	423	12.0

09063000 EAGLE RIVER AT RED CLIFF, CO

LOCATION.--Lat 39°30'30", long 106°21'58", in NW¼SW¼ sec.20, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank at Red Cliff, 0.3 mi upstream from Turkey Creek.

DRAINAGE AREA.--70.0 mi².

PERIOD OF RECORD.--October 1910 to September 1925, May 1944 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area. WRD Colo. 1972: 1971.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,653.80 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Jan. 8, 1911, to Sept. 30, 1925, nonrecording gage at bridge 0.2 mi downstream at different datum. May 24, 1944, to Oct. 12, 1952, water-stage recorder at site 200 ft upstream at datum 1.46 ft, lower. Prior to May 6, 1982, at site 250 ft downstream at datum 5.00 ft, lower.

REMARKS.--Estimated daily discharges: Oct. 31, Nov. 2, 3, 8, 15-20, 24, 27-30, Dec. 1-10, 12-15, 17, 24-30, Jan. 1, 2, 5-9, 11-31, Feb. 3-9, 12, 15-27, Mar. 1, 3-9, 14-17. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station by Columbine, Ewing, and Wurtz ditches. Transbasin diversion upstream from station from Robinson Reservoir, capacity, 2,520 acre-ft to Tenmile Creek for mining development. Small diversions for irrigation of 400 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--61 years (water years 1911-25, 1945-90), 47.4 ft³/s; 34,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,010 ft³/s, June 5, 1912, gage height, 4.0 ft, site and datum then in use, from rating curve extended above 500 ft³/s; maximum gage height recorded, 6.43 ft, May 24, 1984; minimum daily discharge, 1.0 ft³/s, Oct. 1, 5, 1917.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 5	2200	*251	*4.38				

Minimum daily, 6.0 ft³/s, Feb. 16-18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	9.0	12	10	7.0	9.1	21	135	42	16	11
2	11	7.0	10	12	8.3	7.2	9.1	20	125	40	16	12
3	11	11	11	11	7.0	7.0	9.9	21	128	39	16	12
4	11	12	12	11	7.5	7.0	11	22	161	43	15	12
5	10	12	13	11	7.5	7.0	11	24	198	42	15	11
6	10	12	13	11	7.5	7.0	11	32	210	41	15	14
7	10	12	13	11	7.5	7.0	11	44	212	43	14	12
8	10	12	12	11	7.5	7.0	12	48	207	40	14	11
9	10	13	12	11	7.5	8.0	12	40	199	39	13	11
10	10	13	13	9.9	8.1	7.7	12	41	191	36	13	11
11	10	13	13	10	7.5	8.1	12	50	180	35	14	11
12	10	13	12	10	8.0	8.0	13	41	175	31	14	11
13	10	13	12	10	8.1	7.6	13	40	153	28	15	11
14	11	13	12	10	8.2	7.5	14	47	138	29	15	11
15	11	11	12	10	7.0	7.5	18	55	127	29	15	11
16	11	6.5	12	10	6.0	8.0	21	50	115	26	15	11
17	11	9.0	12	10	6.0	8.5	25	44	103	24	15	11
18	11	11	13	10	6.0	9.1	30	46	92	22	15	12
19	10	14	12	10	6.5	8.8	31	46	85	23	14	12
20	11	14	12	10	6.5	8.0	32	49	78	21	13	12
21	12	14	13	9.0	6.5	8.3	39	55	74	22	13	12
22	11	15	12	9.0	6.5	8.2	42	73	69	23	13	11
23	11	15	12	9.0	6.5	9.0	40	85	64	21	13	11
24	11	15	12	9.0	6.5	8.7	36	112	60	20	13	11
25	11	14	10	9.0	6.5	8.8	30	127	58	22	12	11
26	11	15	10	9.0	6.5	9.1	28	131	56	23	12	13
27	11	14	10	9.0	6.5	10	23	125	52	21	11	14
28	11	8.0	10	9.5	6.5	11	22	131	48	19	11	13
29	10	7.0	12	9.5	---	11	23	147	45	19	11	14
30	11	8.0	12	9.5	---	10	23	130	43	18	11	13
31	8.5	---	11	9.5	---	9.7	---	132	---	16	11	---
TOTAL	327.5	357.5	364.0	311.9	200.2	256.8	623.1	2029	3581	897	423	353
MEAN	10.6	11.9	11.7	10.1	7.15	8.28	20.8	65.5	119	28.9	13.6	11.8
MAX	12	15	13	12	10	11	42	147	212	43	16	14
MIN	8.5	6.5	9.0	9.0	6.0	7.0	9.1	20	43	16	11	11
AC-FT	650	709	722	619	397	509	1240	4020	7100	1780	839	700

CAL YR 1989 TOTAL 10646.4 MEAN 29.2 MAX 180 MIN 3.6 AC-FT 21120
WTR YR 1990 TOTAL 9724.0 MEAN 26.6 MAX 212 MIN 6.0 AC-FT 19290

09063200 WEARYMAN CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°31'14", long 106°19'06", in SW¼SE¼ sec.15, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 0.4 mi upstream from mouth and 2.5 mi east of Red Cliff.

DRAINAGE AREA.--8.78 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,158 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 5-10, 19, Oct. 27 to Apr. 15, and Apr. 29-30. Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 8.50 ft³/s; 6,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 155 ft³/s, June 20, 1983, gage height, 3.61 ft; minimum daily, 0.30 ft³/s, Feb. 21, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	1700	*49	*2.54				

Minimum daily, 0.90 ft³/s, Jan. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	1.4	1.8	1.8	1.3	1.4	1.6	1.8	15	16	6.1	4.1
2	2.8	1.6	1.8	1.8	1.3	1.4	1.6	1.6	14	15	6.5	4.4
3	2.8	1.9	1.8	1.8	1.1	1.5	1.6	1.5	16	15	6.3	4.3
4	3.0	2.0	1.8	1.2	1.0	1.6	1.7	1.5	19	14	6.3	4.1
5	2.7	2.0	1.9	.90	1.0	1.6	1.7	1.8	23	14	6.0	4.1
6	2.4	2.0	1.9	1.1	1.0	1.6	1.4	2.5	29	13	5.9	4.2
7	2.4	2.0	1.8	1.3	1.0	1.5	1.0	2.9	36	12	5.8	3.9
8	2.4	2.0	1.6	1.4	1.0	1.4	1.5	3.1	35	12	5.9	3.7
9	2.4	2.0	1.8	1.4	1.1	1.5	1.5	3.2	36	11	5.8	3.6
10	2.4	2.0	1.8	1.4	1.2	1.6	1.5	3.8	35	11	5.7	3.5
11	2.4	2.0	1.6	1.4	1.2	1.7	1.5	4.6	39	10	5.6	3.4
12	2.4	2.0	1.6	1.4	1.2	1.8	1.5	4.2	45	9.7	5.6	3.3
13	2.5	2.0	1.7	1.4	1.2	1.9	1.5	4.5	44	9.5	5.8	3.2
14	2.5	2.0	1.8	1.4	1.2	1.4	1.5	5.0	42	9.7	5.6	3.2
15	2.4	1.4	1.8	1.4	1.1	1.5	1.6	5.6	43	9.1	5.7	3.2
16	2.6	1.8	1.8	1.3	1.1	1.6	1.7	5.4	42	8.9	5.6	3.2
17	2.4	1.8	1.8	1.2	1.1	1.7	1.7	5.2	38	8.4	5.4	4.2
18	2.5	1.8	1.8	1.2	1.1	1.7	1.6	5.2	37	7.7	5.2	3.9
19	2.5	1.8	1.8	1.2	1.2	1.5	1.6	5.4	34	6.9	5.2	3.7
20	2.7	1.8	1.8	1.2	1.2	1.6	1.8	5.8	30	6.7	5.0	3.6
21	1.1	1.8	1.8	1.2	1.2	1.6	2.0	6.5	27	7.6	4.8	3.5
22	1.5	1.8	1.8	1.2	1.2	1.6	2.2	8.2	25	6.9	4.7	3.3
23	2.2	1.8	1.8	1.2	1.2	1.6	2.1	10	24	6.6	4.7	3.2
24	2.4	1.8	1.8	1.2	1.3	1.6	2.1	12	22	6.5	4.6	3.1
25	2.4	1.8	1.8	1.2	1.3	1.6	2.1	13	20	6.6	4.3	3.1
26	2.4	1.8	1.8	1.2	1.4	1.5	2.1	14	20	6.5	4.3	3.5
27	2.3	1.8	1.8	1.2	1.4	1.5	2.1	14	19	6.2	4.2	3.5
28	2.3	1.4	1.8	1.2	1.4	1.5	1.7	15	19	6.1	4.0	4.0
29	2.2	1.0	1.8	1.2	---	1.5	1.8	15	18	5.9	3.9	3.7
30	2.2	1.5	1.8	1.2	---	1.5	1.7	15	17	6.1	3.9	3.6
31	2.2	---	1.8	1.2	---	1.5	---	15	---	5.9	4.0	---
TOTAL	74.2	53.8	55.3	40.40	33.0	48.5	51.0	212.3	863	290.5	162.4	109.3
MEAN	2.39	1.79	1.78	1.30	1.18	1.56	1.70	6.85	28.8	9.37	5.24	3.64
MAX	3.0	2.0	1.9	1.8	1.4	1.9	2.2	15	45	16	6.5	4.4
MIN	1.1	1.0	1.6	.90	1.0	1.4	1.0	1.5	14	5.9	3.9	3.1
AC-FT	147	107	110	80	65	96	101	421	1710	576	322	217

CAL YR 1989 TOTAL 2306.04 MEAN 6.32 MAX 39 MIN .90 AC-FT 4570
WTR YR 1990 TOTAL 1993.70 MEAN 5.46 MAX 45 MIN .90 AC-FT 3950

09063400 TURKEY CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°31'22", long 106°20'08", in NW¼SW¼ sec.16, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 400 ft downstream from Lime Creek, 1.9 mi northeast of Red Cliff, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--23.8 mi².

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,918 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 29 to Apr. 19. Records good except those above 80 ft³/s, which are fair, and estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--27 years, 22.3 ft³/s; 16,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 556 ft³/s, June 8, 1985, gage height, 2.87 ft, from rating curve extended above 325 ft³/s; maximum recorded gage height, 3.22 ft, June 24, 1983 (backwater from debris); minimum discharge, not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 6	1900	---	*2.35	June 11	2000	*194	2.33

Minimum daily discharge, 2.5 ft³/s, Feb. 3-9, 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	5.0	4.5	4.5	3.5	3.5	5.4	8.0	60	42	15	7.5
2	5.6	3.5	4.5	4.5	3.5	3.5	5.4	7.9	58	40	16	7.5
3	5.5	4.5	4.5	4.5	2.5	3.7	5.6	7.8	62	39	15	8.2
4	5.7	5.0	4.5	3.5	2.5	3.9	5.8	7.7	69	37	14	8.1
5	5.6	5.2	4.5	3.5	2.5	4.1	6.0	8.3	78	35	14	8.3
6	5.5	5.2	4.8	3.8	2.5	4.2	5.6	10	83	33	13	8.3
7	5.5	5.2	4.8	4.0	2.5	3.9	6.0	13	75	31	13	7.2
8	5.5	5.2	3.7	4.2	2.5	3.7	6.4	15	64	31	12	6.6
9	5.4	5.2	4.3	4.2	2.5	4.0	6.6	15	61	29	12	6.6
10	5.4	5.2	4.9	4.2	2.7	4.2	7.0	17	68	27	12	6.4
11	5.4	5.0	4.0	4.2	2.8	4.4	7.0	19	100	26	12	6.2
12	5.4	5.0	4.0	4.2	2.8	4.6	7.0	19	130	25	12	6.0
13	5.4	5.0	4.8	4.2	2.8	4.8	7.0	18	120	24	11	5.9
14	5.4	5.0	4.8	4.2	2.8	4.0	7.0	18	106	24	11	5.7
15	5.4	5.0	4.8	4.2	2.5	3.9	7.0	20	95	22	11	5.6
16	5.7	4.8	4.8	4.0	2.5	4.1	7.2	19	83	21	12	5.7
17	5.5	4.8	4.5	3.9	2.7	4.4	7.5	18	93	20	11	8.8
18	5.1	4.8	4.5	3.7	2.8	4.5	7.8	19	103	20	11	7.5
19	5.2	4.8	4.5	3.6	2.9	4.3	7.9	19	93	21	10	6.7
20	5.8	4.8	4.5	3.5	3.0	4.7	8.5	20	79	20	9.8	6.3
21	6.0	4.8	4.5	3.3	3.0	5.0	9.5	23	80	21	9.7	6.2
22	5.8	4.8	4.5	3.3	3.0	5.2	10	30	79	20	9.4	5.9
23	5.7	4.8	4.5	3.4	3.0	5.4	10	39	72	19	9.2	5.7
24	5.7	4.8	4.5	3.5	3.1	5.4	11	52	65	18	9.1	5.7
25	5.7	4.8	4.5	3.2	3.3	5.4	10	58	57	19	8.6	5.8
26	5.7	4.8	4.5	3.0	3.5	5.2	10	59	54	18	8.3	6.3
27	5.3	4.8	4.5	3.0	3.5	5.0	9.4	61	52	17	8.0	5.9
28	5.5	3.9	4.5	3.0	3.5	5.0	9.1	64	50	17	7.9	6.7
29	5.4	3.3	4.5	3.0	---	5.0	9.5	65	46	16	7.6	6.4
30	4.5	4.5	4.5	3.0	---	5.0	8.5	61	45	16	7.5	6.1
31	5.0	---	4.5	3.2	---	5.0	---	59	---	15	7.5	---
TOTAL	169.9	143.5	139.7	115.5	80.7	139.0	230.7	869.7	2280	763	339.6	199.8
MEAN	5.48	4.78	4.51	3.73	2.88	4.48	7.69	28.1	76.0	24.6	11.0	6.66
MAX	6.0	5.2	4.9	4.5	3.5	5.4	11	65	130	42	16	8.8
MIN	4.5	3.3	3.7	3.0	2.5	3.5	5.4	7.7	45	15	7.5	5.6
AC-FT	337	285	277	229	160	276	458	1730	4520	1510	674	396

CAL YR 1989 TOTAL 5621.4 MEAN 15.4 MAX 78 MIN 2.6 AC-FT 11150
WTR YR 1990 TOTAL 5471.1 MEAN 15.0 MAX 130 MIN 2.5 AC-FT 10850

09063900 MISSOURI CREEK NEAR GOLD PARK, CO

LOCATION.--Lat 39°23'25", long 106°28'10", Eagle County, Hydrologic Unit 14010003, on left bank 50 ft downstream from road culvert, 0.6 mi upstream from Fancy Creek, 2.2 mi southwest of Gold Park, and 10 mi southwest of Red Cliff.

DRAINAGE AREA.--6.39 mi².

PERIOD OF RECORD.--August 1972 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 9,980 ft, above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 25 to Apr. 18. Records good except for estimated daily discharges, which are poor. Transmountain diversion upstream from station to Arkansas River basin through Homestake Tunnel. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--18 years, 8.16 ft³/s; 5,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300 ft³/s, July 4, 1975, gage height, 3.19 ft, from rating curve extended above 35 ft³/s; maximum gage height, 3.83 ft, July 30, 1983; minimum daily discharge, 0.24 ft³/s, Feb. 12, 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 103 ft³/s at 2100 June 6, gage height, 2.95 ft; minimum daily, 0.38 ft³/s, Feb. 6 to Mar. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.1	.68	.52	.40	.38	2.0	2.1	19	8.3	5.8	2.1
2	1.8	1.0	.68	.52	.40	.38	1.8	2.1	18	8.0	5.9	2.1
3	1.7	1.0	.68	.52	.40	.38	1.5	2.3	18	17	5.4	2.3
4	2.5	1.0	.66	.52	.40	.38	2.0	1.8	36	40	5.3	2.1
5	2.3	1.0	.66	.52	.40	.38	1.5	1.7	56	23	5.2	4.4
6	2.0	.90	.66	.52	.38	.40	2.0	3.4	60	8.7	4.4	5.3
7	1.8	.90	.66	.52	.38	.40	3.0	7.4	56	7.9	4.1	4.1
8	1.7	.90	.66	.50	.38	.40	2.0	8.6	60	8.8	3.8	3.3
9	1.6	.86	.66	.50	.38	.40	2.5	7.5	53	8.4	3.7	3.0
10	1.6	.84	.64	.50	.38	.40	3.0	7.7	60	7.7	3.5	2.7
11	1.4	.82	.64	.48	.38	.42	3.5	8.6	48	7.2	3.3	2.3
12	1.2	.80	.62	.48	.38	.42	3.5	6.9	33	11	5.4	2.0
13	1.2	.80	.62	.48	.38	.42	2.5	6.1	29	20	7.7	1.8
14	1.1	.78	.60	.48	.38	.42	2.5	7.3	32	18	4.8	1.6
15	1.4	.78	.60	.48	.38	.44	2.8	8.0	23	15	5.5	1.5
16	2.1	.78	.58	.46	.38	.44	2.8	6.9	17	14	5.4	1.3
17	2.3	.76	.56	.46	.38	.46	3.0	6.4	17	14	5.3	4.4
18	2.2	.76	.56	.46	.38	.48	3.0	6.7	21	14	6.1	5.6
19	2.4	.74	.56	.44	.38	.48	3.3	6.8	20	19	5.2	5.0
20	2.4	.74	.56	.44	.38	.50	3.5	8.1	18	15	5.1	3.7
21	1.9	.74	.54	.44	.38	.50	4.7	10	17	17	5.9	3.3
22	1.7	.72	.54	.44	.38	.50	5.8	14	16	15	8.5	2.9
23	1.6	.72	.54	.44	.38	.54	6.2	19	17	12	5.8	2.6
24	1.5	.72	.54	.42	.38	.54	6.6	22	15	12	4.6	2.4
25	1.4	.70	.54	.42	.38	.70	6.1	22	13	16	3.8	2.3
26	1.3	.70	.54	.42	.38	1.5	5.1	21	13	13	3.3	3.2
27	1.3	.70	.54	.42	.38	2.0	4.7	20	12	11	2.9	2.7
28	1.2	.68	.54	.42	.38	1.5	3.5	23	10	8.9	2.6	3.8
29	1.2	.68	.52	.40	---	1.0	2.3	22	8.9	7.9	2.4	3.8
30	1.2	.68	.52	.40	---	1.0	2.2	18	8.9	6.9	2.2	3.5
31	1.1	---	.52	.40	---	1.0	---	21	---	6.2	2.4	---
TOTAL	52.0	24.30	18.42	14.42	10.74	19.16	98.9	328.4	824.8	410.9	145.3	91.1
MEAN	1.68	.81	.59	.47	.38	.62	3.30	10.6	27.5	13.3	4.69	3.04
MAX	2.5	1.1	.68	.52	.40	2.0	6.6	23	60	40	8.5	5.6
MIN	1.1	.68	.52	.40	.38	.38	1.5	1.7	8.9	6.2	2.2	1.3
AC-FT	103	48	37	29	21	38	196	651	1640	815	288	181

CAL YR 1989 TOTAL 2230.79 MEAN 6.11 MAX 45 MIN .26 AC-FT 4420
WTR YR 1990 TOTAL 2038.44 MEAN 5.58 MAX 60 MIN .38 AC-FT 4040

09064000 HOMESTAKE CREEK AT GOLD PARK, CO

LOCATION.--Lat 39°24'20", long 106°25'58", Eagle County, Hydrologic Unit 14010003, on left bank at Gold Park, 400 ft downstream from ford, at Gold Park Campground, 0.5 mi downstream from French Creek, and 8 mi southwest of Red Cliff.

DRAINAGE AREA.--36.0 mi².

PERIOD OF RECORD.--October 1947 to September 1954, August 1972 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 1, 1972, water-stage recorder at site 1,500 ft upstream at datum 9,245 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Estimated daily discharges: Oct. 18 to Mar. 27. Records good except for estimated daily discharges, which are poor. Flow regulated by Homestake Lake, capacity, 44,360 acre-ft, since June 7, 1966. Transmountain diversion upstream from station to Arkansas River basin through Homestake Tunnel since June 6, 1967. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--7 years (water years 1948-54), 63.4 ft³/s; 45,930 acre-ft/yr, prior to diversion through Homestake Tunnel; 18 years (water years 1973-90), 28.4 ft³/s; 20,580 acre-ft/yr, subsequent to diversion through Homestake Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft³/s, June 13, 1953, gage height, 6.84 ft, site and datum then in use, from rating curve extended above 700 ft³/s; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 285 ft³/s at 2100 June 7, gage height, 5.19 ft; minimum daily, 2.8 ft³/s, Jan. 13 to Mar. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	5.0	4.0	3.6	2.8	2.8	11	14	53	23	16	8.8
2	7.1	4.8	3.8	3.6	2.8	2.8	8.7	14	49	22	17	8.8
3	7.1	4.8	3.8	3.6	2.8	2.8	7.9	15	48	42	16	8.8
4	7.4	4.8	3.8	3.6	2.8	2.8	10	14	85	94	15	8.8
5	7.1	4.6	3.8	3.6	2.8	2.8	7.6	13	137	65	15	20
6	6.8	4.6	3.6	3.4	2.8	3.0	9.6	19	158	35	13	27
7	6.8	4.6	3.6	3.4	2.8	3.0	16	33	168	22	12	18
8	6.8	4.6	3.6	3.2	2.8	3.0	8.0	40	168	23	11	15
9	6.8	4.6	3.6	3.2	2.8	3.0	9.6	33	154	21	11	14
10	6.6	4.4	3.6	3.0	2.8	3.0	11	31	173	20	10	13
11	5.7	4.4	3.6	3.0	2.8	3.2	12	33	139	23	10	13
12	5.5	4.4	3.6	3.0	2.8	3.2	9.5	27	103	38	14	11
13	5.5	4.4	3.6	2.8	2.8	3.2	8.5	27	76	47	17	10
14	5.3	4.4	3.6	2.8	2.8	3.2	10	32	75	44	13	9.4
15	5.8	4.4	3.6	2.8	2.8	3.2	12	35	55	38	20	9.1
16	6.9	4.4	3.6	2.8	2.8	3.4	15	29	43	36	19	8.9
17	7.0	4.2	3.6	2.8	2.8	3.4	17	27	40	34	17	14
18	6.6	4.2	3.6	2.8	2.8	3.4	19	29	43	38	18	17
19	6.4	4.2	3.6	2.8	2.8	3.6	20	29	43	50	16	16
20	6.2	4.2	3.6	2.8	2.8	3.6	21	32	39	39	15	14
21	6.0	4.2	3.6	2.8	2.8	3.8	26	35	38	46	17	13
22	6.0	4.2	3.6	2.8	2.8	3.8	30	44	37	41	19	12
23	5.8	4.2	3.6	2.8	2.8	4.0	33	57	37	33	16	11
24	5.6	4.2	3.6	2.8	2.8	4.0	36	65	35	31	14	11
25	5.6	4.2	3.6	2.8	2.8	10	30	61	33	39	12	11
26	5.4	4.2	3.6	2.8	2.8	20	21	56	33	31	11	15
27	5.4	4.0	3.6	2.8	2.8	15	18	50	31	26	10	13
28	5.2	4.0	3.6	2.8	2.8	5.2	17	65	29	22	9.6	16
29	5.2	4.0	3.6	2.8	---	6.2	24	68	26	20	9.2	17
30	5.0	4.0	3.6	2.8	---	4.8	21	51	24	18	8.9	15
31	5.0	---	3.6	2.8	---	5.8	---	56	---	17	9.1	---
TOTAL	190.7	131.2	112.8	93.4	78.4	145.0	499.4	1134	2172	1078	430.8	398.6
MEAN	6.15	4.37	3.64	3.01	2.80	4.68	16.6	36.6	72.4	34.8	13.9	13.3
MAX	7.4	5.0	4.0	3.6	2.8	20	36	68	173	94	20	27
MIN	5.0	4.0	3.6	2.8	2.8	2.8	7.6	13	24	17	8.9	8.8
AC-FT	378	260	224	185	156	288	991	2250	4310	2140	854	791

CAL YR 1989 TOTAL 7357.3 MEAN 20.2 MAX 105 MIN 3.6 AC-FT 14590
WTR YR 1990 TOTAL 6464.3 MEAN 17.7 MAX 173 MIN 2.8 AC-FT 12820

09064500 HOMESTAKE CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°28'24", long 106°22'02", in NE¼NE¼ sec.6, T.7 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank at downstream side of Forest Service road bridge, 2.4 mi south of Red Cliff, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--58.2 mi².

PERIOD OF RECORD.--October 1910 to September 1918, May 1944 to current year. Published as "at Redcliff" October 1910 to September 1916.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,783 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). See WSP 1713 or 1733 for history of changes prior to May 8, 1961.

REMARKS.--Estimated daily discharges: Nov. 14 to Apr. 15. Records good except for estimated daily discharges, which are poor. Flow regulated by Homestake Lake (capacity, 44,360 acre-ft) since June 7, 1966. Transmountain diversions upstream from station through Homestake Tunnel (see elsewhere in this report) since June 6, 1967. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--30 years (water years 1911-18, 1945-66), 86.6 ft³/s; 62,740 acre-ft/yr, prior to diversion through Homestake Tunnel; 24 years (water years 1967-90), 42.2 ft³/s; 30,570 acre-ft/yr, subsequent to diversion through Homestake Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,300 ft³/s, June 24, 1918, gage height, 6.2 ft, site and datum then in use; minimum observed, 0.60 ft³/s, Jan. 25, 1915 (discharge measurement).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 370 ft³/s at 2400 June 6, gage height, 3.19 ft; minimum daily, 1.8 ft³/s, Sept. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	9.2	8.0	7.5	6.5	4.5	16	18	90	25	15	2.1
2	8.7	7.6	8.0	6.5	7.0	4.5	17	30	84	24	16	1.8
3	8.7	8.8	8.0	5.5	6.0	4.5	18	22	82	29	15	2.0
4	9.3	11	8.5	5.0	6.5	4.5	19	22	117	106	12	2.4
5	11	10	9.0	4.5	7.0	4.5	20	20	196	85	12	4.4
6	9.6	12	9.0	4.5	7.0	4.5	23	26	212	52	8.6	36
7	8.2	9.9	9.0	5.0	7.0	4.0	15	43	208	34	7.2	19
8	8.2	12	8.0	5.5	7.0	4.0	9.5	55	206	37	5.8	12
9	8.1	13	8.5	6.0	6.0	4.5	7.6	45	188	32	4.4	11
10	7.7	12	9.0	6.0	5.5	4.5	12	39	208	28	3.8	8.7
11	7.8	12	7.0	6.0	5.0	4.5	14	47	178	27	3.6	8.3
12	6.8	11	8.0	6.0	5.0	4.5	12	37	143	36	5.0	6.0
13	6.8	11	9.0	6.0	4.5	4.5	10	35	94	53	12	4.7
14	6.2	11	10	6.0	4.5	4.0	13	41	95	50	7.3	4.5
15	6.8	9.0	10	6.0	4.5	4.0	19	51	79	43	9.0	4.0
16	12	7.0	9.0	6.0	3.9	4.5	24	46	60	40	16	3.5
17	13	9.0	9.0	6.0	4.5	4.0	29	37	56	38	12	6.5
18	12	9.0	9.0	6.0	4.5	5.0	31	39	55	37	12	18
19	8.6	9.0	9.0	6.5	4.5	6.0	35	38	57	62	11	17
20	10	9.0	10	7.0	4.5	8.0	33	45	51	47	8.4	13
21	13	9.0	9.5	6.5	4.5	10	38	50	49	51	12	12
22	12	9.0	9.0	7.0	4.5	12	44	64	46	49	14	9.7
23	12	8.5	9.0	7.0	4.5	14	46	83	46	36	11	8.2
24	11	9.0	9.0	7.0	4.5	14	50	101	46	32	8.2	8.7
25	11	9.0	9.0	6.0	4.5	15	42	92	41	37	5.8	8.1
26	12	9.0	9.0	6.0	4.5	16	31	88	39	32	4.5	17
27	9.7	9.0	9.0	5.5	4.5	17	24	79	37	23	3.5	15
28	11	8.0	8.0	6.0	4.5	17	24	93	33	19	2.8	20
29	10	6.5	8.0	6.0	---	16	26	112	30	16	2.4	21
30	6.7	7.0	8.0	6.0	---	15	22	80	26	14	2.0	17
31	7.9	---	8.0	6.0	---	14	---	95	---	14	2.3	---
TOTAL	294.9	286.5	270.5	186.5	146.9	253.0	724.1	1663	2852	1208	264.6	321.6
MEAN	9.51	9.55	8.73	6.02	5.25	8.16	24.1	53.6	95.1	39.0	8.54	10.7
MAX	13	13	10	7.5	7.0	17	50	112	212	106	16	36
MIN	6.2	6.5	7.0	4.5	3.9	4.0	7.6	18	26	14	2.0	1.8
AC-FT	585	568	537	370	291	502	1440	3300	5660	2400	525	638

CAL YR 1989 TOTAL 10669.8 MEAN 29.2 MAX 122 MIN 2.3 AC-FT 21160
WTR YR 1990 TOTAL 8471.6 MEAN 23.2 MAX 212 MIN 1.8 AC-FT 16800

09064600 EAGLE RIVER NEAR MINTURN, CO

LOCATION.--Lat 39°33'14", long 106°24'07", in SW¼SE¼ of unsurveyed sec. T.65, R.81 W., Eagle County, Hydrologic Unit 14010003, on left bank 500 ft. upstream from U.S. Highway 24 bridge, and 2.5 miles southeast of White River National Forest Headquarters in Minturn.

DRAINAGE AREA.--186 mi².

PERIOD OF RECORD.--October 1989 to September 1990.

GAGE.--Water-stage recorder. Elevation of gage is 8,078.37 ft above National Geodetic Vertical Datum of 1929, from levels by private engineering firm.

REMARKS.--Estimated daily discharges: Oct. 31 to Nov. 4, Nov. 16, 17, and Nov. 25 to Mar. 20. Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station by Columbine, Ewing, and Wurtz ditches. Transmountain diversion from Robinson Reservoir, capacity 2,520 acre-ft, for use in Tenmile creek basin. Several small diversions for irrigation upstream from station. No regulation. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 881 ft³/s, June 7, 1990, gage height, 5.29 ft; minimum daily, 13 ft³/s, Jan. 4, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 881 ft³/s, at 0200 June 7, gage height, 5.29 ft; minimum daily, 13 ft³/s, Jan. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	27	19	23	19	17	48	77	376	149	56	38
2	26	18	19	23	19	17	51	79	363	143	60	38
3	26	25	17	23	17	17	55	83	346	141	60	38
4	27	27	16	13	19	17	60	83	433	231	54	40
5	30	28	17	14	20	17	37	86	612	215	55	41
6	29	29	19	15	20	17	37	102	687	176	52	71
7	28	27	19	16	21	16	41	141	728	161	49	58
8	27	28	19	16	21	17	45	170	736	173	47	49
9	27	29	21	18	20	17	48	151	717	153	45	46
10	27	28	23	18	21	18	44	148	740	133	43	43
11	26	26	17	18	21	18	51	174	699	119	43	41
12	25	26	19	18	21	18	55	150	656	113	45	39
13	24	26	22	18	21	18	53	145	512	122	53	37
14	26	28	24	18	20	16	54	158	485	120	51	35
15	26	26	24	17	16	18	71	187	437	108	52	34
16	33	15	22	17	15	23	84	172	379	101	62	34
17	33	24	20	18	17	32	94	153	339	98	59	43
18	30	25	22	18	17	28	101	162	317	90	60	49
19	25	28	23	18	17	27	107	162	307	119	56	47
20	29	29	23	18	17	25	107	180	285	103	52	44
21	32	29	23	18	17	21	121	200	269	115	54	42
22	32	28	23	17	17	25	130	257	252	113	55	40
23	30	26	23	18	17	32	133	326	238	93	54	38
24	29	27	23	19	17	35	135	411	228	85	49	37
25	28	27	23	19	17	40	122	417	215	92	45	38
26	29	27	22	19	17	45	108	416	205	87	42	48
27	25	27	22	16	17	47	92	387	194	73	41	47
28	26	17	22	18	17	48	88	407	180	67	39	51
29	24	16	23	18	---	47	90	459	167	64	37	53
30	24	17	24	18	---	45	82	363	155	62	36	48
31	24	---	23	18	---	44	---	382	---	59	37	---
TOTAL	855	760	656	555	515	822	2344	6788	12257	3678	1543	1307
MEAN	27.6	25.3	21.2	17.9	18.4	26.5	78.1	219	409	119	49.8	43.6
MAX	33	29	24	23	21	48	135	459	740	231	62	71
MIN	24	15	16	13	15	16	37	77	155	59	36	34
AC-FT	1700	1510	1300	1100	1020	1630	4650	13460	24310	7300	3060	2590

WTR YR 1990 MEAN 87.9 MAX 740 MIN 13 AC-FT 63630

09065100 CROSS CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°34'05", Long 106°24'43", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.36, T.5 S., R.81 W., Eagle County, Hydrologic Unit 14010003, on right bank 0.4 mi upstream from mouth and 1.5 mi southeast of Minturn.

DRAINAGE AREA.--34.2 mi².

PERIOD OF RECORD.--May 1956 to September 1963, October 1967 to current year.

REVISED RECORDS.--WDR CO-81-2: 1980 (M). WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,992 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 18, 1956, nonrecording gage at site 0.3 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 31 to Jan. 30, Feb. 3 to Mar. 1, Mar. 5-17, 19-20. Records good except for estimated daily discharges, which are poor. Bolts ditch exports water upstream from station to tailings ponds and recreation lake along Eagle River. Diversion 0.5 mi upstream from station for water supply of school and for municipal supply of Minturn. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--30 years, 52.0 ft³/s; 37,670 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 754 ft³/s, June 30, 1957, gage height, 5.45 ft; maximum gage height, 6.14 ft, Aug. 6, 1983; minimum daily discharge, 0.1 ft³/s, Dec. 27-31, 1962, Jan. 6-8, 11-15, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 8	0500	*458	*4.67	No other peak greater than base discharge.			

Minimum daily, 1.8 ft³/s, Mar. 17, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	5.4	3.2	2.8	2.5	1.9	6.4	18	147	109	24	8.7
2	8.4	5.2	3.2	2.8	2.5	1.9	6.5	18	111	102	25	7.5
3	7.6	5.0	3.2	2.8	2.5	1.9	7.7	19	107	98	25	8.2
4	8.0	4.8	3.2	2.8	2.6	1.9	9.6	19	230	130	22	10
5	9.2	4.6	3.2	2.8	2.8	2.0	10	20	356	96	21	9.9
6	9.0	4.4	3.0	2.8	3.0	2.0	11	28	372	112	18	40
7	8.6	4.4	3.0	2.8	3.0	2.0	13	43	368	109	16	27
8	8.4	4.2	3.0	2.8	3.0	2.0	12	48	396	171	15	21
9	7.9	4.0	3.0	2.8	3.0	2.2	12	38	391	133	13	17
10	7.3	4.0	3.0	2.8	2.8	2.4	12	40	405	90	12	15
11	7.1	3.8	3.0	2.8	2.6	2.2	13	51	382	81	12	13
12	6.5	3.8	3.0	2.8	2.6	2.2	14	42	362	68	12	10
13	6.1	3.6	3.0	2.8	2.6	2.2	13	39	210	60	14	9.0
14	6.1	3.6	3.0	2.8	2.4	2.0	12	39	286	56	13	7.4
15	6.1	3.6	3.0	2.8	2.4	2.0	17	49	275	51	13	8.1
16	8.9	3.6	3.0	2.8	2.4	2.0	23	46	210	47	20	7.7
17	10	3.4	3.0	2.8	2.4	1.8	27	39	197	47	24	12
18	8.5	3.4	3.0	2.8	2.4	1.8	29	41	223	44	29	27
19	8.8	3.4	3.0	2.8	2.4	2.0	30	41	246	79	24	22
20	8.6	3.4	3.0	2.8	2.4	2.2	30	46	215	59	21	18
21	8.3	3.4	3.0	2.8	2.4	2.4	37	52	216	59	20	15
22	8.6	3.4	3.0	2.8	2.4	5.1	43	82	196	63	19	12
23	8.4	3.4	3.0	2.8	2.4	3.9	41	117	206	50	18	11
24	7.7	3.4	3.0	2.6	2.4	4.1	41	164	213	43	16	10
25	7.2	3.2	3.0	2.6	2.4	6.6	35	151	198	48	13	9.3
26	7.0	3.2	3.0	2.6	2.2	7.3	31	163	183	49	12	10
27	6.2	3.2	3.0	2.6	2.2	5.9	26	154	182	40	10	12
28	7.1	3.2	3.0	2.6	2.0	5.0	24	169	172	35	9.0	16
29	6.8	3.2	3.0	2.6	---	4.8	23	202	148	32	8.4	20
30	6.2	3.2	3.0	2.6	---	4.8	22	140	123	29	7.7	17
31	5.8	---	3.0	2.5	---	4.8	---	153	---	27	8.1	---
TOTAL	239.2	114.4	94.0	85.1	70.7	95.3	631.2	2271	7326	2217	514.2	430.8
MEAN	7.72	3.81	3.03	2.75	2.52	3.07	21.0	73.3	244	71.5	16.6	14.4
MAX	10	5.4	3.2	2.8	3.0	7.3	43	202	405	171	29	40
MIN	5.8	3.2	3.0	2.5	2.0	1.8	6.4	18	107	27	7.7	7.4
AC-FT	474	227	186	169	140	189	1250	4500	14530	4400	1020	854

CAL YR 1989 TOTAL 14199.0 MEAN 38.9 MAX 259 MIN 2.2 AC-FT 28160
WTR YR 1990 TOTAL 14088.9 MEAN 38.6 MAX 405 MIN 1.8 AC-FT 27950

09065500 GORE CREEK AT UPPER STATION, NEAR MINTURN, CO

LOCATION.--Lat 39°37'33", long 106°16'39", in NE¼NW¼ sec.18, T.5 S., R.79 W., Eagle County, Hydrologic Unit 14010003, on right bank 10 ft downstream from bridge pier on Interstate 70, 0.2 mi upstream from Black Gore Creek, 4.4 mi east of Vail, and 8.4 mi northeast of Minturn.

DRAINAGE AREA.--14.4 mi².

PERIOD OF RECORD.--October 1947 to September 1956, October 1963 to current year.

REVISED RECORDS.--WDR CO-89-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,600 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1947 to Sept. 30, 1956, Oct. 1, 1963 to Sept. 30, 1980, at various sites about 1200 ft upstream at different datums. See WDR CO-80-2, for history of changes prior to Oct. 1, 1980.

REMARKS.--Estimated daily discharges: Oct. 17 to Apr. 26, May 27-31, and July 31 to Aug. 3. Records fair except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--36 years, 29.9 ft³/s; 21,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 662 ft³/s, June 24, 1983, gage height, 2.60 ft, from rating curve extended above 140 ft³/s; maximum gage height, 6.65 ft, June 18, 1951, datum then in use; minimum daily discharge, 1.2 ft³/s, Mar. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s, and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 7	1800	*592	a*2.45	No other peak greater than base discharge.			

Minimum daily, 2.3 ft³/s, Feb. 5-10.

a Recorded, mean of surge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	3.5	3.0	3.0	2.7	2.5	5.0	14	98	84	15	5.1
2	5.8	3.4	3.0	3.0	2.6	2.5	5.5	10	95	79	16	5.1
3	5.7	3.4	3.0	3.0	2.6	2.5	6.0	13	92	89	14	5.1
4	5.5	3.3	3.0	3.0	2.5	2.5	6.6	13	170	91	13	5.8
5	5.5	3.0	3.0	3.0	2.3	2.5	7.2	16	282	73	12	8.2
6	5.5	3.0	3.0	3.0	2.3	2.5	7.8	25	288	70	10	14
7	5.5	3.0	3.0	3.0	2.3	2.5	8.4	45	335	65	9.6	12
8	5.3	3.0	3.0	3.0	2.3	2.5	9.2	37	285	71	9.2	9.2
9	5.1	3.0	3.0	3.0	2.3	2.5	10	30	300	67	8.7	8.3
10	5.1	3.0	3.0	3.0	2.3	2.5	9.8	33	341	53	8.3	7.4
11	5.1	3.0	3.0	3.0	2.4	2.5	9.5	41	332	46	7.8	6.6
12	5.1	3.0	3.0	3.0	2.4	2.5	9.2	34	299	40	7.8	5.5
13	5.1	3.0	3.0	3.0	2.5	2.5	9.0	30	236	35	8.2	5.5
14	5.1	3.0	3.0	3.0	2.5	2.5	9.4	30	250	39	8.2	5.2
15	4.8	3.0	3.0	3.0	2.5	2.5	10	31	298	35	7.8	4.5
16	4.8	3.0	3.0	3.0	2.5	2.5	11	29	236	30	8.2	4.5
17	4.5	3.0	3.0	3.0	2.5	2.5	13	29	205	29	8.7	7.3
18	4.3	3.0	3.0	3.0	2.5	2.5	14	35	200	31	8.7	9.1
19	4.2	3.0	3.0	3.0	2.5	2.5	15	34	195	36	9.6	7.8
20	4.0	3.0	3.0	3.0	2.5	3.0	17	32	180	31	10	7.0
21	4.0	3.0	3.0	3.0	2.5	3.4	19	46	176	31	12	5.9
22	4.0	3.0	3.0	3.0	2.5	3.7	21	65	183	27	10	5.5
23	4.0	3.0	3.0	3.0	2.5	4.0	23	87	213	26	9.6	4.8
24	4.0	3.0	3.0	3.0	2.5	4.5	25	133	165	23	8.7	4.2
25	4.0	3.0	3.0	3.0	2.5	5.0	22	141	137	26	7.8	4.2
26	4.0	3.0	3.0	3.0	2.5	5.5	20	141	149	23	6.6	4.5
27	4.0	3.0	3.0	3.0	2.5	6.0	18	132	142	21	5.9	4.5
28	4.0	3.0	3.0	3.0	2.5	5.8	17	125	125	19	5.8	4.8
29	3.9	3.0	3.0	3.0	---	5.4	19	118	111	18	5.5	5.1
30	3.7	3.0	3.0	2.9	---	5.2	12	110	93	14	5.2	5.1
31	3.6	---	3.0	2.8	---	5.0	---	105	---	13	5.1	---
TOTAL	145.0	91.6	93.0	92.7	69.0	104.0	388.6	1764	6211	1335	283.0	191.8
MEAN	4.68	3.05	3.00	2.99	2.46	3.35	13.0	56.9	207	43.1	9.13	6.39
MAX	5.8	3.5	3.0	3.0	2.7	6.0	25	141	341	91	16	14
MIN	3.6	3.0	3.0	2.8	2.3	2.5	5.0	10	92	13	5.1	4.2
AC-FT	288	182	184	184	137	206	771	3500	12320	2650	561	380

CAL YR 1989 TOTAL 8438.9 MEAN 23.1 MAX 166 MIN 1.5 AC-FT 16740
WTR YR 1990 TOTAL 10768.7 MEAN 29.5 MAX 341 MIN 2.3 AC-FT 21360

09066000 BLACK GORE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°35'47", long 106°15'52", T.5 S., R.79 W., Eagle County, Hydrologic Unit 14010003, on right bank 200 ft from U.S. Highway 6, 0.3 mi upstream from Timber Creek, 2.5 mi upstream from mouth, and 9 mi east of Minturn.

DRAINAGE AREA.--12.6 mi².

PERIOD OF RECORD.--October 1947 to September 1956, October 1963 to current year.

REVISED RECORDS.--WDR CO-89-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1963, at site 15 ft upstream, at present datum.

REMARKS.--Estimated daily discharges: Oct. 19, 20, Oct. 29 to Nov. 3, Nov. 5 to Apr. 12. Records good except for estimated daily discharges, which are poor. No diversions upstream from station. Natural regulation by two small recreation lakes upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--36 years, 17.0 ft³/s; 12,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 365 ft³/s, June 7, 1952, gage height, 5.42 ft; maximum gage height, 6.00 ft, Mar. 30, 1968 (backwater from ice); minimum daily discharge, 0.90 ft³/s, Feb. 22, 1968, Jan. 30, 1970, Feb. 4 to Mar. 6, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 6	2100	*235	*4.28	No other peak greater than base discharge.			

Minimum daily, 1.9 ft³/s, Feb. 5-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.6	2.2	2.0	2.0	2.0	3.0	9.9	87	21	5.6	3.1
2	2.6	2.6	2.2	2.0	2.0	2.0	3.2	9.7	78	19	6.3	3.3
3	2.6	2.6	2.2	2.0	2.0	2.0	3.3	9.6	83	21	6.0	3.1
4	2.8	2.6	2.2	2.0	2.0	2.0	3.5	9.4	124	21	5.4	3.2
5	2.7	2.6	2.2	2.0	1.9	2.0	3.7	9.7	155	19	5.1	4.3
6	2.6	2.6	2.2	2.0	1.9	2.0	3.9	12	165	18	5.0	3.9
7	2.6	2.5	2.2	2.0	1.9	2.0	4.0	16	173	18	4.7	3.3
8	2.6	2.5	2.2	2.0	1.9	2.0	4.3	16	165	18	4.4	3.2
9	2.6	2.5	2.2	2.0	1.9	2.0	4.5	16	151	16	4.3	3.0
10	2.5	2.5	2.2	2.0	1.9	2.0	4.2	20	143	15	4.1	2.9
11	2.5	2.5	2.2	2.0	2.0	2.0	3.9	23	135	13	4.0	2.8
12	2.5	2.5	2.2	2.0	2.0	2.0	3.7	18	126	12	4.2	2.7
13	2.4	2.5	2.2	2.0	2.0	2.0	3.4	18	104	12	4.2	2.6
14	2.5	2.4	2.1	2.0	2.0	2.0	4.2	18	93	13	4.0	2.6
15	2.6	2.3	2.1	2.0	2.0	2.0	6.4	22	83	11	4.6	2.5
16	3.0	2.3	2.0	2.0	2.0	2.0	8.1	20	74	11	5.0	2.6
17	3.0	2.2	2.0	2.0	2.0	2.0	9.4	17	64	10	4.8	4.4
18	2.6	2.2	2.0	2.0	2.0	2.0	10	18	58	9.9	5.0	3.4
19	3.0	2.2	2.0	2.0	2.0	2.0	11	19	54	9.7	5.0	3.0
20	2.9	2.2	2.0	2.0	2.0	2.2	11	23	49	8.9	4.2	2.8
21	3.0	2.2	2.0	2.0	2.0	2.3	13	31	46	9.2	4.1	2.7
22	2.8	2.2	2.0	2.0	2.0	2.5	13	41	42	8.3	3.9	2.6
23	2.6	2.2	2.0	2.0	2.0	2.7	13	55	39	7.9	3.8	2.6
24	2.6	2.2	2.0	2.0	2.0	2.9	12	74	36	7.5	3.6	2.6
25	2.6	2.2	2.0	2.0	2.0	3.1	9.6	85	33	8.2	3.4	2.6
26	2.6	2.2	2.0	2.0	2.0	3.3	8.5	88	30	7.2	3.2	2.9
27	2.9	2.2	2.0	2.0	2.0	3.5	8.7	82	28	6.7	3.2	2.6
28	2.8	2.2	2.0	2.0	2.0	3.3	8.3	91	26	6.3	3.1	3.0
29	2.7	2.2	2.0	2.0	---	3.1	9.6	90	24	6.0	3.0	2.9
30	2.7	2.2	2.0	2.0	---	3.0	11	72	22	5.8	3.0	2.8
31	2.6	---	2.0	2.0	---	3.0	---	84	---	5.7	3.1	---
TOTAL	83.1	70.9	64.8	62.0	55.4	72.9	215.4	1117.3	2490	375.3	133.3	90.0
MEAN	2.68	2.36	2.09	2.00	1.98	2.35	7.18	36.0	83.0	12.1	4.30	3.00
MAX	3.0	2.6	2.2	2.0	2.0	3.5	13	91	173	21	6.3	4.4
MIN	2.4	2.2	2.0	2.0	1.9	2.0	3.0	9.4	22	5.7	3.0	2.5
AC-FT	165	141	129	123	110	145	427	2220	4940	744	264	179

CAL YR 1989 TOTAL 4285.7 MEAN 11.7 MAX 103 MIN 1.7 AC-FT 8500
WTR YR 1990 TOTAL 4830.4 MEAN 13.2 MAX 173 MIN 1.9 AC-FT 9580

09066100 BIGHORN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'24", long 106°17'34", in N½ sec.12, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 0.3 mi upstream from U.S. Highway 6, 0.4 mi upstream from mouth, 4.5 mi east of Vail, and 8.5 mi northeast of Minturn.

DRAINAGE AREA.--4.54 mi².

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 8,625 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 9 to Mar. 31, Apr. 23-25, May 1-21, and June 18-19. Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--27 years, 9.91 ft³/s; 7,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 338 ft³/s, June 8, 1985, gage height, 4.10 ft, from rating curve extended above 82 ft³/s; maximum gage height, 4.26 ft, June 8, 1985 (backwater from debris); minimum daily discharge determined, 0.10 ft³/s, Feb. 8, 1967, Jan. 30, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	0100	62	3.39	June 8	2200	*144	*3.77

Minimum daily discharge, 0.76 ft³/s, Feb. 12-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.2	1.0	.90	.80	.80	1.8	3.5	33	29	5.6	2.3
2	1.4	1.2	1.0	.90	.80	.80	2.1	3.5	25	25	6.5	2.2
3	1.4	1.2	1.0	.90	.80	.80	2.3	3.5	29	27	5.5	2.3
4	1.6	1.2	1.0	.90	.80	.80	2.3	3.5	63	29	5.0	2.3
5	1.5	1.1	1.0	.90	.80	.80	2.5	5.0	103	24	4.7	3.6
6	1.4	1.1	1.0	.90	.80	.80	2.7	7.0	95	22	4.7	4.1
7	1.4	1.1	1.0	.90	.80	.80	2.6	10	97	22	4.4	3.4
8	1.4	1.1	1.0	.90	.80	.80	2.4	9.0	106	25	4.3	3.0
9	1.3	1.1	1.0	.90	.80	.80	2.5	8.0	97	25	4.2	2.8
10	1.3	1.1	1.0	.90	.80	.80	2.6	10	93	22	4.0	2.6
11	1.2	1.1	1.0	.90	.78	.80	2.5	12	99	18	3.8	2.5
12	1.1	1.1	1.0	.90	.76	.80	2.6	11	83	16	4.0	2.4
13	1.1	1.1	1.0	.90	.76	.80	3.4	10	74	14	3.8	2.3
14	1.1	1.0	.98	.90	.76	.80	4.1	9.0	86	15	3.8	2.2
15	1.2	1.0	.94	.90	.76	.80	4.7	11	73	12	3.8	2.2
16	1.4	1.0	.90	.90	.78	.80	5.0	10	59	11	3.8	2.2
17	1.3	1.0	.90	.90	.80	.80	5.2	10	59	9.9	4.1	3.1
18	1.3	1.0	.90	.90	.80	.80	5.1	10	60	12	3.9	3.0
19	1.2	1.0	.90	.90	.80	.80	6.7	11	56	12	4.1	2.8
20	1.3	1.0	.90	.90	.80	.90	8.5	11	62	10	3.7	2.6
21	1.3	1.0	.90	.90	.80	1.0	9.1	12	59	9.9	3.3	2.5
22	1.3	1.0	.90	.90	.80	1.1	8.4	21	57	8.7	3.1	2.4
23	1.3	1.0	.90	.86	.80	1.2	7.8	32	58	8.1	2.8	2.3
24	1.3	1.0	.90	.84	.80	1.3	7.0	48	55	7.7	2.7	2.3
25	1.3	1.0	.90	.82	.80	1.5	6.5	49	48	9.2	2.5	2.3
26	1.3	1.0	.90	.80	.80	1.6	5.8	46	52	8.1	2.4	2.9
27	1.2	1.0	.90	.80	.80	1.8	4.9	42	52	7.5	2.4	2.4
28	1.2	1.0	.90	.80	.80	1.6	4.3	48	45	6.9	2.3	2.6
29	1.2	1.0	.90	.80	---	1.5	3.5	47	37	6.2	2.2	2.6
30	1.2	1.0	.90	.80	---	1.4	3.5	33	32	5.8	2.2	2.7
31	1.2	---	.90	.80	---	1.5	---	36	---	5.5	2.3	---
TOTAL	40.2	31.7	29.32	27.12	22.20	31.60	132.4	582.0	1947	463.5	115.9	78.9
MEAN	1.30	1.06	.95	.87	.79	1.02	4.41	18.8	64.9	15.0	3.74	2.63
MAX	1.6	1.2	1.0	.90	.80	1.8	9.1	49	106	29	6.5	4.1
MIN	1.1	1.0	.90	.80	.76	.80	1.8	3.5	25	5.5	2.2	2.2
AC-FT	80	63	58	54	44	63	263	1150	3860	919	230	156

CAL YR 1989 TOTAL 2915.36 MEAN 7.99 MAX 58 MIN .66 AC-FT 5780
WTR YR 1990 TOTAL 3501.84 MEAN 9.59 MAX 106 MIN .76 AC-FT 6950

09066150 PITKIN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'37", long 106°18'07", in SW¼SW¼ sec.1, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank, 1,000 ft upstream from U.S. Highway 6, 1,200 ft upstream from mouth, 4.0 mi east of Vail, and 8 mi northeast of Minturn.

DRAINAGE AREA.--5.32 mi².

PERIOD OF RECORD.--Annual maximum and occasional low-flow measurements water years 1965-66. October 1966 to current year.

REVISED RECORDS.--WRD Colo. 1971: 1967-70. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 8,525 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1964, to Sept. 30, 1966, crest-stage gage at datum 0.98 ft lower, at site 300 ft downstream.

REMARKS.--Estimated daily discharges: Nov. 27 to Mar. 16. Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 11.6 ft³/s; 8,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 265 ft³/s, June 8, 1985, gage height, 2.85 ft; maximum gage height, 3.50 ft, June 21, 1983 (backwater from debris); minimum daily discharge, 0.24 ft³/s, Oct. 29 to Nov. 1, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 5	0300	*52	*2.44				

Minimum daily, 0.99 ft³/s, Mar. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.3	2.0	2.0	1.5	1.5	1.4	4.8	31	26	7.0	3.7
2	2.9	2.6	2.0	2.0	1.5	1.5	1.5	4.7	27	25	8.1	3.6
3	2.8	2.6	2.0	2.0	1.5	1.5	1.7	4.6	30	25	6.9	3.8
4	3.1	2.2	2.0	2.0	1.5	1.5	1.9	5.2	40	28	6.2	3.9
5	3.1	2.1	2.0	2.0	1.5	1.5	2.2	5.9	46	25	5.9	5.2
6	3.0	2.3	2.0	2.0	1.5	1.5	2.2	8.0	47	25	5.7	5.6
7	3.0	2.5	2.0	2.0	1.5	1.5	2.3	11	47	23	5.6	5.1
8	2.8	2.3	2.0	2.0	1.5	1.5	2.4	10	45	28	5.5	4.6
9	2.8	2.2	2.0	2.0	1.5	1.5	2.5	9.3	44	24	5.4	4.2
10	2.8	2.1	2.0	1.9	1.5	1.5	2.5	9.5	42	22	5.3	4.1
11	2.3	2.2	2.0	1.8	1.5	1.4	2.5	11	40	19	5.2	3.9
12	2.0	2.2	2.0	1.7	1.5	1.3	2.6	9.6	41	17	5.4	3.8
13	2.0	2.2	2.0	1.7	1.5	1.3	2.4	8.6	39	16	5.2	3.7
14	1.9	2.1	2.0	1.6	1.5	1.2	2.5	8.0	40	18	5.2	3.6
15	2.0	2.3	2.0	1.6	1.5	1.1	3.3	8.2	38	16	5.3	3.6
16	2.8	2.6	2.0	1.5	1.5	1.0	4.2	7.8	39	14	5.3	3.6
17	3.0	2.4	2.0	1.5	1.5	.99	4.9	7.4	40	13	5.8	4.8
18	2.6	2.0	2.0	1.5	1.5	1.1	5.2	8.0	43	15	5.6	5.4
19	2.4	1.9	2.0	1.5	1.5	1.1	5.9	8.4	43	16	6.0	4.9
20	2.5	2.0	2.0	1.5	1.5	1.1	6.2	9.2	42	14	5.4	4.3
21	2.6	2.0	2.0	1.5	1.5	1.2	8.6	11	42	15	5.3	4.1
22	2.7	1.9	2.0	1.5	1.5	1.1	9.9	16	41	13	5.1	3.9
23	2.6	1.8	2.0	1.5	1.5	1.3	9.9	25	41	12	5.0	3.8
24	2.6	1.8	2.0	1.5	1.5	1.2	9.3	34	41	11	4.9	3.7
25	2.5	2.0	2.0	1.5	1.5	1.3	8.0	35	38	14	4.5	3.8
26	2.3	2.2	2.0	1.5	1.5	1.4	7.1	36	40	12	4.1	5.2
27	2.4	1.9	2.0	1.5	1.5	1.6	6.2	34	40	9.8	3.9	4.3
28	2.4	2.0	2.0	1.5	1.5	1.5	5.7	37	38	9.0	3.9	4.7
29	2.2	2.0	2.0	1.5	---	1.5	5.7	36	34	8.3	3.7	4.9
30	2.6	2.0	2.0	1.5	---	1.4	5.3	31	30	7.8	3.7	5.0
31	2.8	---	2.0	1.5	---	1.4	---	32	---	7.1	3.8	---
TOTAL	80.4	64.7	62.0	52.3	42.0	41.49	136.0	486.2	1189	528.0	163.9	128.8
MEAN	2.59	2.16	2.00	1.69	1.50	1.34	4.53	15.7	39.6	17.0	5.29	4.29
MAX	3.1	2.6	2.0	2.0	1.5	1.6	9.9	37	47	28	8.1	5.6
MIN	1.9	1.8	2.0	1.5	1.5	.99	1.4	4.6	27	7.1	3.7	3.6
AC-FT	159	128	123	104	83	82	270	964	2360	1050	325	255

CAL YR 1989 TOTAL 2526.46 MEAN 6.92 MAX 36 MIN .96 AC-FT 5010
WTR YR 1990 TOTAL 2974.79 MEAN 8.15 MAX 47 MIN .99 AC-FT 5900

09066200 800TH CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'54", long 106°19'21", at NE¼SE¼ of sec.3, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on center bridge pier 100 ft upstream from U.S. Highway 6, 0.4 mi upstream from mouth, 3.0 mi northeast of Vail, and 7.0 mi northeast of Minturn.

DRAINAGE AREA.--6.02 mi².

PERIOD OF RECORD.--October 1964 to current year.

REVISED RECORDS.--WDR CO-89-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,325 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 4, 1984, gage at site 1,000 ft upstream at different datum (gage destroyed by rock slide).

REMARKS.--Estimated daily discharges: Nov. 26-27, and Dec. 16 to Mar. 16. Records good except for estimated daily discharges, which are poor. No diversion or regulation upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 12.2 ft³/s; 8,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 355 ft³/s, June 15, 1978, gage height, 4.07 ft; maximum gage height, 4.62 ft, June 18, 1983 (backwater from debris); minimum daily discharge, 0.20 ft³/s, Feb. 8, 1967, Jan. 29, 1970, Feb. 10-11, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 216 ft³/s at 2000, June 8, gage height, 3.43 ft; minimum daily, 0.51 ft³/s, Mar. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	.95	.76	1.0	.70	.84	1.3	4.6	41	19	4.5	1.6
2	.78	1.0	.76	1.0	.70	.88	1.4	4.3	35	17	4.8	1.5
3	.76	.97	.80	1.0	.70	.92	1.7	4.6	38	18	4.2	1.5
4	.99	.93	.85	1.0	.74	.95	2.4	5.6	67	18	3.8	1.5
5	1.0	.94	.78	1.0	.76	1.0	2.3	6.8	89	17	3.6	1.8
6	.91	1.0	.76	1.0	.80	1.0	2.1	10	96	16	3.3	2.2
7	.85	1.1	.76	1.0	.80	1.0	2.4	16	116	17	3.1	1.9
8	.84	1.1	.80	1.0	.80	1.1	2.4	14	137	21	2.9	1.7
9	.85	1.1	.81	1.0	.80	1.2	2.4	12	119	19	2.7	1.6
10	.81	1.1	.76	1.0	.80	1.2	2.2	13	105	15	2.6	1.5
11	1.0	1.1	.76	1.0	.80	1.2	2.3	16	104	13	2.5	1.3
12	.76	1.2	.76	1.0	.80	1.3	2.4	14	79	11	2.5	1.2
13	.74	1.2	.76	1.0	.80	1.3	2.2	13	80	10	2.5	1.2
14	.68	1.1	.81	1.0	.80	1.3	2.2	12	83	11	2.5	1.1
15	.96	1.1	.94	1.0	.80	.90	3.2	13	65	9.2	2.8	1.1
16	1.4	.88	1.1	1.0	.80	.62	4.8	12	59	8.1	2.7	1.1
17	1.2	.58	1.1	1.0	.80	.51	5.6	11	58	7.1	3.6	2.3
18	1.1	.83	1.0	1.0	.80	.56	5.8	13	62	10	3.1	2.6
19	.98	.81	1.3	1.0	.80	.64	6.8	13	57	10	3.8	2.0
20	1.2	.86	1.3	1.0	.80	.81	7.3	14	51	9.0	3.0	1.8
21	1.3	.91	1.2	1.0	.80	.96	11	17	47	10	2.7	1.7
22	1.3	.89	1.2	1.0	.80	.98	12	24	47	8.6	2.5	1.6
23	1.2	.82	1.1	.95	.80	1.3	12	38	47	7.2	2.3	1.5
24	1.3	.86	1.0	.92	.80	1.2	12	52	42	6.5	2.2	1.5
25	1.2	.88	1.0	.88	.80	1.3	10	58	36	10	2.0	1.5
26	1.1	.90	1.0	.84	.80	1.4	8.4	63	36	7.7	1.9	2.3
27	1.1	.90	1.0	.80	.80	1.6	7.0	57	34	6.5	1.8	1.8
28	1.1	.84	1.0	.76	.82	1.5	6.0	61	30	5.8	1.7	1.9
29	1.0	.86	1.0	.74	---	1.4	5.3	58	26	5.3	1.6	2.1
30	1.0	.80	1.0	.72	---	1.3	4.9	40	22	4.9	1.5	2.2
31	1.0	---	1.0	.70	---	1.2	---	41	---	4.5	1.6	---
TOTAL	31.17	28.51	29.17	29.31	22.02	33.37	151.8	730.9	1908	352.4	86.3	50.6
MEAN	1.01	.95	.94	.95	.79	1.08	5.06	23.6	63.6	11.4	2.78	1.69
MAX	1.4	1.2	1.3	1.0	.82	1.6	12	63	137	21	4.8	2.6
MIN	.68	.58	.76	.70	.70	.51	1.3	4.3	22	4.5	1.5	1.1
AC-FT	62	57	58	58	44	66	301	1450	3780	699	171	100

CAL YR 1989 TOTAL 2871.04 MEAN 7.87 MAX 58 MIN .58 AC-FT 5690
WTR YR 1990 TOTAL 3453.55 MEAN 9.46 MAX 137 MIN .51 AC-FT 6850

09066300 MIDDLE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'45", long 106°22'54", in sec.6, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 200 ft upstream from Interstate Highway 70, 0.2 mi upstream from mouth, and 5.0 mi northeast of Minturn.

DRAINAGE AREA.--5.94 mi².

PERIOD OF RECORD.--October 1964 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1977 at site 700 ft upstream, at different datum.

REMARKS.--Estimated daily discharges: Nov. 23 to Mar. 14 and Apr. 22 to May 2. Records good except for estimated daily discharges, which are poor. No diversion or regulation upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 5.89 ft³/s; 4,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 116 ft³/s, June 20, 1974, gage height, 2.65 ft, datum then in use; maximum gage height, 3.28 ft, June 25, 1983, backwater from debris; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft³/s, and maximum(*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 8	1900	*62	*2.55	No other peak greater than base discharge.			
Minimum daily, 0.11 ft ³ /s, Sept. 15.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.44	.40	.40	.40	.16	.17	.86	11	8.6	2.3	.60
2	.35	.43	.40	.40	.40	.16	.18	.80	9.9	7.7	2.7	.65
3	.38	.47	.40	.40	.40	.16	.20	.73	12	7.4	2.4	.64
4	.47	.45	.40	.40	.38	.16	.25	.76	18	7.4	2.1	.55
5	.40	.42	.40	.40	.36	.16	.24	.85	27	6.7	1.9	1.3
6	.31	.41	.40	.40	.34	.16	.23	1.3	32	6.3	1.8	1.7
7	.33	.41	.40	.40	.32	.16	.25	2.2	37	6.8	1.7	.90
8	.30	.40	.40	.40	.30	.16	.27	2.1	44	8.1	1.6	.73
9	.34	.41	.40	.40	.28	.16	.27	1.9	43	7.0	1.3	.68
10	.32	.43	.40	.40	.27	.16	.26	2.1	44	6.0	1.1	.57
11	.31	.42	.40	.40	.25	.16	.27	2.6	43	5.4	1.0	.49
12	.28	.41	.40	.40	.25	.16	.30	2.1	41	4.8	1.1	.36
13	.27	.42	.40	.40	.25	.16	.26	2.0	37	4.4	1.1	.27
14	.26	.37	.40	.40	.25	.16	.31	2.1	38	4.6	1.1	.20
15	.30	.38	.40	.40	.25	.16	.46	2.4	33	4.0	1.1	.11
16	.59	.45	.40	.40	.25	.15	.61	2.1	29	3.6	1.2	.18
17	.50	.42	.40	.40	.24	.15	.69	2.0	27	3.4	2.1	2.1
18	.45	.39	.40	.40	.23	.15	.66	2.4	28	4.6	1.8	2.0
19	.33	.38	.40	.40	.22	.15	.78	2.4	26	4.5	3.1	1.1
20	.50	.40	.40	.40	.21	.16	.81	2.6	25	3.8	1.6	.76
21	.58	.40	.40	.40	.20	.16	.85	3.1	23	4.5	1.4	.65
22	.62	.37	.40	.40	.19	.16	1.7	4.3	22	4.0	1.2	.52
23	.56	.34	.40	.40	.18	.20	1.7	5.4	21	3.4	1.1	.45
24	.53	.35	.40	.40	.18	.18	1.7	7.9	19	3.2	.94	.41
25	.51	.37	.40	.40	.17	.18	1.5	9.9	18	4.4	.80	.44
26	.55	.38	.40	.40	.16	.20	1.3	11	16	3.3	.68	1.6
27	.42	.40	.40	.40	.16	.21	1.2	10	15	2.9	.59	.79
28	.38	.40	.40	.40	.16	.20	1.1	13	12	2.7	.58	.87
29	.30	.40	.40	.40	---	.19	1.0	13	11	2.6	.56	.90
30	.40	.40	.40	.40	---	.17	.92	11	9.4	2.4	.56	.99
31	.43	---	.40	.40	---	.18	---	11	---	2.4	.60	---
TOTAL	12.62	12.12	12.40	12.40	7.25	5.19	20.44	135.90	771.3	150.9	43.11	23.51
MEAN	.41	.40	.40	.40	.26	.17	.68	4.38	25.7	4.87	1.39	.78
MAX	.62	.47	.40	.40	.40	.21	1.7	13	44	8.6	3.1	2.1
MIN	.26	.34	.40	.40	.16	.15	.17	.73	9.4	2.4	.56	.11
AC-FT	25	24	25	25	14	10	41	270	1530	299	86	47

CAL YR 1989 TOTAL 1105.66 MEAN 3.03 MAX 27 MIN .26 AC-FT 2190
WTR YR 1990 TOTAL 1207.14 MEAN 3.31 MAX 44 MIN .11 AC-FT 2390

09066310 GORE CREEK AT LOWER STATION, AT VAIL, CO

LOCATION.--Lat 39°38'28", long 106°23'37", in NW¼NW¼ SEC.7, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 40 ft south of the water treatment plant at Vail, 0.1 mi upstream from Red Sandstone Creek, and 0.6 mi downstream from Middle Creek.

DRAINAGE AREA.--77.1 mi².

PERIOD OF RECORD.--August 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,060 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges, Oct. 1-10, Nov. 16, Nov. 28 to Dec. 4, Dec. 8, 11-12, 17-18, 25-28, Jan. 1-7, 18, 21-30, Feb. 3-4, 6, 9, and 16. Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,240 ft³/s, June 8, 1990, gage height, 10.83 ft; minimum daily, 7.2 ft³/s, Feb. 12-13, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 8	2100	*1,240	*10.83	No other peak greater than base discharge.			
Minimum daily, 7.2 ft ³ /s, Feb. 12, 13.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	15	14	12	7.4	8.1	14	39	397	228	47	21
2	19	14	14	12	7.4	7.9	15	39	336	207	55	21
3	18	16	14	13	8.5	8.4	17	39	360	213	51	20
4	19	16	14	13	9.0	9.3	21	40	566	229	45	21
5	20	15	14	13	8.9	9.3	23	48	766	191	42	28
6	19	16	14	13	9.0	9.5	21	66	820	184	39	40
7	19	15	14	13	7.5	9.1	23	105	857	176	36	31
8	18	15	14	14	7.4	9.5	24	101	915	203	34	27
9	17	17	14	12	7.9	9.7	28	87	879	187	33	25
10	15	16	14	11	7.3	9.8	24	92	874	161	31	24
11	15	16	14	12	7.3	9.9	23	122	868	143	30	22
12	15	16	14	12	7.2	10	24	99	781	128	31	20
13	15	16	14	12	7.2	10	22	87	713	117	32	19
14	14	15	12	12	7.3	11	23	86	731	126	31	18
15	15	14	12	12	7.8	11	32	103	641	112	31	17
16	20	15	13	12	8.0	10	42	95	562	101	34	17
17	18	16	13	13	7.6	9.9	49	85	525	93	34	27
18	16	15	13	12	7.4	10	52	93	533	101	36	33
19	14	14	14	12	8.4	10	54	93	522	109	38	26
20	17	14	13	12	7.6	11	57	101	479	92	32	24
21	18	15	13	12	7.4	12	75	137	463	96	34	22
22	18	14	14	12	7.4	14	83	205	441	86	30	21
23	17	14	14	11	7.5	16	87	290	429	76	30	20
24	17	14	13	10	7.5	15	89	401	411	70	28	18
25	16	14	13	10	7.6	16	72	431	374	85	26	18
26	17	14	13	9.2	7.6	17	60	427	368	73	24	25
27	15	13	13	9.5	7.5	18	54	410	349	65	23	21
28	16	14	13	9.5	7.9	18	50	458	316	59	21	22
29	15	14	12	9.0	---	16	46	467	281	54	20	23
30	15	14	11	9.0	---	14	43	363	248	52	19	24
31	14	---	13	7.5	---	14	---	402	---	49	21	---
TOTAL	520	446	414	355.7	216.5	363.4	1247	5611	16805	3866	1018	695
MEAN	16.8	14.9	13.4	11.5	7.73	11.7	41.6	181	560	125	32.8	23.2
MAX	20	17	14	14	9.0	18	89	467	915	229	55	40
MIN	14	13	11	7.5	7.2	7.9	14	39	248	49	19	17
AC-FT	1030	885	821	706	429	721	2470	11130	33330	7670	2020	1380

CAL YR 1989 TOTAL 31952.3 MEAN 87.5 MAX 617 MIN 8.4 AC-FT 63380
WTR YR 1990 TOTAL 31557.6 MEAN 86.5 MAX 915 MIN 7.2 AC-FT 62590

09066400 RED SANDSTONE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°40'58", long 106°24'03", Eagle County, Hydrologic Unit 14010003, on left bank 150 ft upstream from road culvert, 1,400 ft upstream from Indian Creek, and 6.8 mi north of Minturn.

DRAINAGE AREA.--7.32 mi².

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder, and concrete control. Elevation of gage is 9,212 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 18 to Apr. 8. Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--27 years, 8.99 ft³/s; 6,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 215 ft³/s, June 19, 1983, gage height, 4.66 ft, maximum gage height, 5.18 ft, Apr. 17, 1987 (backwater from ice); minimum daily discharge, 0.20 ft³/s, Jan. 30, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 5	2000	*96	*3.92	No other peak greater than base discharge.			
Minimum daily, 0.62 ft ³ /s, Feb. 13-15.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.90	.75	.80	.78	.73	.90	3.8	43	11	3.8	1.4
2	1.1	.85	.81	.80	.78	.70	.98	3.7	39	10	3.6	1.4
3	1.1	.90	.76	.83	.70	.70	1.1	3.7	43	9.8	3.6	1.6
4	1.1	1.0	.82	.83	.70	.70	1.1	4.4	61	11	3.5	1.8
5	1.1	.93	.89	.76	.70	.70	1.1	5.3	74	9.6	3.3	1.9
6	1.1	.85	.95	.72	.74	.76	1.1	8.6	75	10	3.1	2.4
7	1.1	.85	.88	.70	.72	.76	1.2	11	72	12	2.9	1.6
8	1.2	.90	.80	.70	.70	.72	1.4	10	70	16	2.5	1.6
9	1.2	.90	.85	.75	.66	.70	1.5	8.9	63	13	2.6	1.4
10	1.1	.86	.90	.81	.66	.70	1.5	11	58	10	2.3	1.4
11	1.1	.86	.90	.89	.70	.70	1.8	11	55	9.5	2.3	1.3
12	1.1	.86	.90	.89	.66	.76	2.3	9.3	58	8.0	2.1	1.3
13	1.1	.95	.87	.85	.62	.80	1.8	8.9	48	7.2	2.1	1.3
14	1.1	.93	.87	.85	.62	.80	1.8	9.9	45	7.1	2.5	1.2
15	1.1	.87	.87	.85	.62	.80	3.0	11	43	6.9	2.7	1.1
16	1.1	.87	.81	.85	.64	.80	4.1	9.6	36	6.3	2.5	1.1
17	1.1	.87	.79	.79	.68	.80	4.5	9.9	31	5.9	3.1	2.2
18	1.0	.94	.79	.75	.70	.80	4.3	11	30	7.6	3.3	2.9
19	.89	.87	.79	.72	.72	.80	4.6	12	29	8.0	5.4	1.9
20	.98	.87	.83	.72	.72	.80	5.4	14	27	6.3	3.6	1.5
21	1.1	.87	.88	.72	.72	.84	6.8	20	25	7.6	3.0	1.3
22	1.1	.87	.88	.72	.68	.88	7.9	26	23	6.9	2.7	1.3
23	1.1	.87	.88	.78	.72	.85	8.6	34	22	5.7	2.5	1.1
24	1.0	.87	.88	.72	.78	.80	8.0	48	20	5.1	2.3	1.1
25	1.0	.94	.88	.70	.80	.80	6.7	51	19	7.9	2.3	1.2
26	1.0	.94	.84	.70	.80	.88	5.9	47	19	6.1	1.9	1.5
27	.91	.87	.79	.70	.80	.99	5.1	46	17	5.2	1.7	1.6
28	.91	.81	.79	.70	.77	.93	4.6	50	15	4.8	1.5	1.5
29	.84	.75	.81	.70	---	.87	3.9	52	13	4.5	1.5	1.5
30	.82	.72	.88	.70	---	.83	4.4	44	12	4.2	1.5	1.6
31	.82	---	.82	.76	---	.83	---	43	---	4.0	1.5	---
TOTAL	32.37	26.34	26.16	23.76	19.89	24.53	107.38	638.0	1185	247.2	83.2	46.0
MEAN	1.04	.88	.84	.77	.71	.79	3.58	20.6	39.5	7.97	2.68	1.53
MAX	1.2	1.0	.95	.89	.80	.99	8.6	52	75	16	5.4	2.9
MIN	.82	.72	.75	.70	.62	.70	.90	3.7	12	4.0	1.5	1.1
AC-FT	64	52	52	47	39	49	213	1270	2350	490	165	91

CAL YR 1989 TOTAL 2148.92 MEAN 5.89 MAX 58 MIN .50 AC-FT 4260
WTR YR 1990 TOTAL 2459.83 MEAN 6.74 MAX 75 MIN .62 AC-FT 4880

09067000 BEAVER CREEK AT AVON, CO

LOCATION.--Lat 39°37'47", long 106°31'20", in NE¼SW¼ sec.12, T.5 S., R.82 W., Eagle County, Hydrologic Unit 14010003, on left bank at Avon, 550 ft upstream from U.S. Highway 6 and 24, and 700 ft upstream from mouth.

DRAINAGE AREA.--14.8 mi².

PERIOD OF RECORD.--January to December 1911, January 1912 to September 1914 (gage heights and discharge measurements only), May 1974 to February 1988. October 1988 to current year.

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,453 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 1, 1974, nonrecording gage near present site, at different datum.

REMARKS.--Estimated daily discharges: Oct. 29, Oct. 31 to Nov. 3, 11, 13, 15-21, Nov. 27 to Dec. 3, Dec. 25-27, Jan. 1, 2, 4-7, 18, 21-23, 28, Feb. 4-6, 15, 16, Mar. 14, 17. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation upstream and downstream from station. Slight natural regulation by several small lakes in headwaters. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years (water years 1975-87, 1989-90), 13.1 ft³/s; 9,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 249 ft³/s, June 27, 1983, gage height, 3.46 ft; minimum daily, 0.55 ft³/s, Sept. 10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 8	2000	*81	*2.67	No other peak greater than base discharge.			
Minimum daily, 2.4 ft ³ /s, Nov. 14.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	3.4	3.1	3.4	3.1	3.0	4.1	6.2	33	22	5.8	3.3
2	3.1	3.2	3.2	3.5	2.7	3.1	4.4	6.1	28	21	7.0	3.3
3	3.1	3.2	3.2	3.6	3.1	3.3	4.9	5.8	30	22	6.7	3.3
4	3.6	3.5	3.3	3.3	3.0	3.5	4.9	5.6	40	25	5.9	3.6
5	4.0	3.3	3.3	3.0	2.9	3.6	4.9	6.2	49	20	5.3	5.1
6	3.6	3.1	3.6	3.1	3.1	3.5	4.8	7.7	47	21	5.1	6.0
7	3.5	3.3	3.5	3.2	3.2	4.0	4.7	9.8	51	22	4.4	5.3
8	3.1	3.5	3.1	3.3	3.3	3.3	4.8	10	66	23	4.3	4.2
9	3.0	3.3	3.7	2.8	2.8	3.3	5.4	9.1	57	20	4.1	3.7
10	3.0	3.3	3.4	2.8	2.8	3.4	4.8	9.7	58	18	4.1	3.5
11	2.9	3.0	2.8	2.8	2.7	3.4	5.1	11	60	16	4.0	3.3
12	2.9	2.7	3.1	3.2	2.8	3.3	5.5	9.9	63	14	4.3	3.0
13	2.8	2.5	3.4	3.1	2.8	3.1	5.2	9.1	53	13	4.5	3.0
14	2.9	2.4	3.6	2.9	2.9	3.0	5.7	9.5	51	13	4.4	2.7
15	3.0	3.1	3.7	3.2	2.7	3.1	7.1	13	51	12	4.3	2.7
16	4.4	3.8	3.3	3.3	2.6	3.2	7.5	13	49	11	4.9	3.1
17	3.8	3.8	3.4	3.3	2.6	3.2	7.8	10	50	12	5.5	6.2
18	3.4	3.8	3.7	3.2	2.7	3.2	7.8	11	49	11	5.8	6.6
19	3.0	3.9	3.6	3.0	2.7	3.3	8.9	11	48	13	5.5	5.2
20	3.1	3.8	3.7	3.3	2.8	3.7	9.2	12	41	10	4.5	4.8
21	3.1	3.5	3.4	3.2	2.6	4.5	9.8	12	42	12	4.3	4.3
22	3.2	3.2	3.9	3.3	2.6	4.5	11	16	39	10	4.2	3.9
23	3.1	3.2	4.1	3.2	2.7	4.6	11	22	37	9.2	4.0	3.7
24	3.3	3.2	3.6	3.5	2.7	4.4	10	28	35	8.5	3.6	3.5
25	3.3	3.5	3.6	3.3	2.8	4.2	8.8	30	33	11	3.5	3.4
26	3.5	3.7	3.3	3.6	2.9	4.2	7.5	32	31	8.7	3.5	4.0
27	2.6	3.7	3.2	3.5	3.0	4.1	6.5	30	29	7.4	3.3	3.7
28	2.7	3.3	3.4	3.3	3.0	4.0	6.4	31	27	6.9	3.0	3.9
29	3.0	3.0	3.5	3.0	---	4.2	6.7	35	25	6.9	2.6	4.4
30	3.5	2.9	3.2	3.2	---	3.9	6.2	30	23	6.1	2.8	4.0
31	3.2	---	3.2	3.2	---	4.0	---	32	---	6.0	3.2	---
TOTAL	99.9	99.1	106.1	99.6	79.6	113.1	201.4	483.7	1295	431.7	138.4	120.7
MEAN	3.22	3.30	3.42	3.21	2.84	3.65	6.71	15.6	43.2	13.9	4.46	4.02
MAX	4.4	3.9	4.1	3.6	3.3	4.6	11	35	66	25	7.0	6.6
MIN	2.6	2.4	2.8	2.8	2.6	3.0	4.1	5.6	23	6.0	2.6	2.7
AC-FT	198	197	210	198	158	224	399	959	2570	856	275	239

CAL YR 1989 TOTAL 3614.8 MEAN 9.90 MAX 48 MIN 1.6 AC-FT 7170
WTR YR 1990 TOTAL 3268.3 MEAN 8.95 MAX 66 MIN 2.4 AC-FT 6480

09067005 EAGLE RIVER AT AVON, CO

LOCATION.--Lat 39°37'54", long 106°31'19", in SE¼NW¼ sec. 12, T.5S., R. 82 W., Eagle County, Hydrologic Unit 14010003, on left bank 100 ft downstream from bridge, 300 ft north of Highway 6 and 24, 350 ft downstream from Beaver Creek, in the city of Avon.

DRAINAGE AREA.--395 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,410 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 1 to Mar. 17, and July 14-19. Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation and municipal use. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,970 ft³/s, June 8, 1990, gage height, 4.79 ft; minimum daily, 32 ft³/s, Nov. 29, 1989, Jan. 5, 6, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,970 ft³/s at 2400 June 8, gage height, 4.79 ft; minimum daily, 32 ft³/s, Nov. 29, Jan. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	60	40	40	43	40	78	211	1410	670	174	81
2	78	57	40	40	45	40	82	210	1270	631	195	83
3	77	56	40	40	40	40	89	217	1230	634	192	79
4	78	54	43	35	42	40	102	218	1630	792	162	86
5	84	54	45	32	45	40	112	234	2140	697	157	90
6	80	52	45	32	45	40	106	288	2270	669	149	179
7	78	52	45	35	45	37	115	427	2380	636	136	145
8	76	52	40	37	45	38	124	483	2460	748	127	115
9	77	52	43	40	40	39	133	425	2450	670	123	101
10	77	52	45	40	45	40	121	425	2240	563	116	91
11	74	52	35	40	45	40	127	537	2160	517	112	83
12	73	50	40	40	50	40	140	462	2080	486	113	77
13	70	50	45	40	47	40	132	426	1700	486	130	74
14	72	50	50	40	45	37	127	437	1700	470	124	69
15	73	45	50	40	40	40	164	524	1560	440	120	66
16	91	40	45	40	38	42	207	496	1320	420	140	65
17	92	45	45	40	40	44	233	440	1200	400	148	95
18	85	45	45	40	40	47	257	468	1180	370	159	129
19	73	45	45	43	40	44	267	466	1170	410	156	107
20	80	45	50	45	40	49	275	525	1160	389	131	97
21	89	45	47	43	40	55	334	597	1160	399	133	92
22	87	45	45	45	40	59	384	812	1100	391	125	86
23	83	42	45	45	40	72	397	1010	1080	333	124	81
24	82	45	45	45	40	72	399	1290	1070	300	113	77
25	81	45	45	40	40	76	357	1490	1010	335	106	75
26	82	45	45	40	40	82	311	1550	985	320	96	96
27	71	45	45	37	40	86	266	1480	946	269	90	94
28	73	40	40	40	40	88	248	1590	882	238	83	97
29	71	32	40	40	---	83	242	1760	808	218	78	107
30	66	35	40	40	---	77	227	1370	731	201	77	102
31	65	---	40	40	---	75	---	1430	---	187	81	---
TOTAL	2418	1427	1353	1234	1180	1642	6156	22298	44482	14289	3970	2819
MEAN	78.0	47.6	43.6	39.8	42.1	53.0	205	719	1483	461	128	94.0
MAX	92	60	50	45	50	88	399	1760	2460	792	195	179
MIN	65	32	35	32	38	37	78	210	731	187	77	65
AC-FT	4800	2830	2680	2450	2340	3260	12210	44230	88230	28340	7870	5590

CAL YR 1989 TOTAL 105436 MEAN 289 MAX 1700 MIN 32 AC-FT 209100
WTR YR 1990 TOTAL 103268 MEAN 283 MAX 2460 MIN 32 AC-FT 204800

09069000 EAGLE RIVER AT GYPSUM, CO

LOCATION.--Lat 39°39'00", Long 106°57'06", Eagle County, Hydrologic Unit 14010003, at bridge at Gypsum, about 400 ft upstream from Gypsum Creek, about 520 ft upstream from bridge on U.S. Highways 6 and 24, and about 550 ft upstream from gaging station.

DRAINAGE AREA.--944 mi², at gaging station.

PERIOD OF RECORD.--April 1947 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1947 to current year.

WATER TEMPERATURE: April 1949 to current year.

REMARKS.--Records of discharge are given for Eagle River below Gypsum (station 09070000), located 550 ft, downstream from Eagle River at Gypsum (station 09069000).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,200 microsiemens March 9, 1990; minimum daily, 130 microsiemens June 9, 10, 1976.

WATER TEMPERATURES: Maximum daily, 24°C Aug. 24, 1949, several days in August, 1988, and July 27, 1990; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,200 microsiemens March 9; minimum daily, 300 microsiemens June 1-7, 9-12, 16-18, and 20.

WATER TEMPERATURES: Maximum daily, 24.0°C July 27; minimum daily, 0.0°C on many days during winter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 13...	0930	102	1530	7.6	0.0	11.3	470	140	28	100
MAR 21...	0920	131	1440	7.8	7.0	10.6	370	110	24	130
JUN 07...	0920	3090	151	7.6	8.0	9.1	63	19	3.8	4.2
AUG 22...	0910	164	954	7.8	16.0	8.4	320	97	19	67

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 13...	2	4.2	169	320	150	0.2	9.9	857	1.17
MAR 21...	3	2.6	136	260	210	0.3	5.5	827	1.12
JUN 07...	0.2	0.8	47	22	4.1	<0.1	4.8	88	0.12
AUG 22...	2	3.0	128	200	97	0.3	7.5	569	0.77

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)
DEC 13...	301	18	0.70	0.72	0.3	0.3	1.0	0.08	0.04
MAR 21...	288	10	0.50	0.50	0.4	0.6	0.9	0.09	0.06
JUN 07...	732	127	0.10	0.10	0.8	0.5	0.9	0.09	0.02
AUG 22...	252	7	0.20	0.30	0.2	0.2	0.4	0.05	0.04

EAGLE RIVER BASIN

09069000 EAGLE RIVER AT GYPSUM, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL- LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
DEC 13...	0930	<1	<1	<1	59	<0.5	<1	<1	2
MAR 21...	0920	<1	<1	<1	52	<0.5	1	4	<1
JUN 07...	0920	1	1	<1	31	0.6	2	<1.0	7
AUG 22...	0910	<1	<1	<1	79	<0.5	<1	<1.0	1

DATE	CHRO- MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA- NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)
DEC 13...	1	3	2	15	2	<1	230	<0.1	<0.1
MAR 21...	<5	6	<10	28	1	<10	430	<0.1	0.1
JUN 07...	<1	10	3	70	23	<1	54	<0.1	<0.1
AUG 22...	<1	6	2	6	2	<1	68	<0.1	<0.1

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC 13...	2	1	<1	<1	<1	<1.0	250	180
MAR 21...	3	<10	<1	<1	<1	<1.0	290	91
JUN 07...	7	<1	<1	<1	<1	<1.0	480	25
AUG 22...	2	<1	<1	<1	<1	<1.0	70	8

09069000 EAGLE RIVER AT GYPSUM, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C) WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100	1000	1000	1200	1500	1800	1800	---	300	400	1400	1300
2	1100	---	1000	1100	1500	1800	2000	---	300	400	1400	1300
3	1100	---	1000	1000	1500	1800	2000	---	300	480	1400	1300
4	1100	1000	1000	1100	1400	1800	2000	---	300	400	1400	1300
5	1100	1000	1020	1120	1500	1900	2000	---	300	420	1400	1200
6	1000	1000	1020	1000	1600	1800	2000	---	300	460	1400	1300
7	1100	1020	---	1000	1500	2000	2000	---	300	400	1400	1300
8	---	---	---	1000	1400	2000	2000	---	400	500	1430	1300
9	1100	---	1020	1000	1400	2200	1800	---	300	600	1500	1300
10	1100	1020	1000	1100	1500	2000	1800	---	300	600	1400	1300
11	1100	1000	1020	1100	1500	1800	1800	---	300	800	1400	1300
12	1100	---	---	1100	1400	1800	2000	---	300	800	1500	1200
13	1100	1000	1020	1000	1500	1800	1800	---	400	800	1400	1200
14	---	1000	---	1000	1400	1800	1100	---	400	750	1500	1200
15	---	1000	1000	1000	1500	1700	1100	---	400	700	1500	1100
16	1100	1000	1000	1100	1500	1800	1100	---	300	800	1500	1100
17	---	---	---	1000	1500	1900	1100	---	300	800	1500	1000
18	1000	---	1020	1000	1400	1900	1100	---	300	1000	1500	1100
19	---	---	1000	1100	1500	1900	1000	---	400	1000	1500	1100
20	---	1000	1000	1100	1500	1800	800	---	300	1000	1500	1000
21	1000	1000	1000	1100	1500	1800	700	---	400	1000	1500	1000
22	1000	---	1020	1000	1500	1600	700	---	400	1000	1500	1000
23	1100	---	1020	1000	1500	1600	600	---	400	1100	1500	1000
24	1100	---	1000	1000	1400	1600	700	---	400	1200	1500	1000
25	1000	1020	1000	1000	1400	1700	700	---	400	1100	1500	1000
26	1000	---	1020	1000	1500	1700	700	---	400	1100	1500	1000
27	900	1000	1020	1000	1400	1700	650	---	400	1200	1500	1000
28	---	1000	1020	1200	1400	1700	700	---	400	1200	1500	1000
29	900	1000	1000	1650	---	1800	700	---	400	1200	1500	1000
30	900	1000	1100	1500	---	1800	700	---	400	1200	1500	1000
31	900	---	1100	1500	---	1800	---	---	---	1400	1400	---
MEAN	---	---	---	1100	1470	1810	1300	---	350	833	1460	1140

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.0	10.0	.0	.0	.0	6.0	13.0	---	12.0	12.0	15.0	19.0
2	12.0	---	.0	.0	.0	6.0	12.0	---	12.0	12.0	15.0	19.0
3	12.0	---	.0	.0	.0	6.0	13.0	---	12.0	13.0	15.0	20.0
4	12.0	10.0	.0	.0	.0	6.0	13.0	---	13.0	12.0	18.0	20.0
5	12.0	10.0	.0	.0	.0	7.0	13.0	---	13.0	14.0	18.0	21.0
6	12.0	10.0	.0	.0	.0	6.0	12.0	---	11.0	14.0	18.0	19.0
7	18.0	9.0	---	.0	.0	8.0	12.0	---	12.0	14.0	19.0	20.0
8	---	---	---	.0	.0	8.0	12.0	---	14.0	15.0	20.0	20.0
9	18.0	---	.0	.0	.0	8.0	12.0	---	12.0	15.0	20.0	19.0
10	18.0	9.0	.0	.0	.0	8.0	12.0	---	14.0	15.0	19.0	14.0
11	17.0	9.0	.0	.0	.0	6.0	12.0	---	14.0	17.0	19.0	19.0
12	18.0	---	---	.0	.0	6.0	12.0	---	15.0	17.0	20.0	18.0
13	18.0	9.0	.0	.0	.0	6.0	12.0	---	15.0	17.0	19.0	18.0
14	---	10.0	---	.0	.0	6.0	15.0	---	14.0	18.0	20.0	18.0
15	---	10.0	.0	.0	.0	5.0	15.0	---	14.0	17.0	18.0	19.0
16	17.0	10.0	.0	.0	.0	7.0	15.0	---	13.0	18.0	19.0	18.0
17	---	---	---	.0	.0	7.0	15.0	---	13.0	18.0	20.0	18.0
18	16.0	---	.0	.0	.0	7.0	15.0	---	12.0	20.0	20.0	18.0
19	---	---	.0	.0	.0	7.0	15.0	---	14.0	20.0	19.0	18.0
20	---	10.0	.0	.0	.0	8.0	15.0	---	14.0	22.0	20.0	19.0
21	16.0	10.0	.0	.0	.0	8.0	15.0	---	14.0	20.0	20.0	18.0
22	16.0	---	.0	.0	.0	8.0	15.0	---	13.0	20.0	20.0	18.0
23	14.0	---	.0	.0	.0	8.0	15.0	---	14.0	19.0	20.0	18.0
24	14.0	---	.0	.0	.0	8.0	15.0	---	17.0	22.0	20.0	19.0
25	16.0	5.0	.0	.0	.0	10.0	15.0	---	14.0	21.0	20.0	18.0
26	16.0	---	.0	.0	.0	10.0	15.0	---	16.0	22.0	20.0	18.0
27	16.0	8.0	.0	.0	.0	9.0	14.0	---	14.0	24.0	20.0	18.0
28	---	8.0	.0	.0	.0	10.0	14.0	---	12.0	21.0	20.0	15.0
29	14.0	8.0	.0	1.0	---	12.0	15.0	---	14.0	21.0	20.0	16.0
30	12.0	8.0	.0	1.0	---	13.0	15.0	---	14.0	20.0	20.0	15.0
31	12.0	---	.0	.0	---	13.0	---	---	---	15.0	19.0	---
MEAN	---	---	---	.1	.0	7.8	13.8	---	13.5	17.6	19.0	18.2

09070000 EAGLE RIVER BELOW GYPSUM, CO

LOCATION.--Lat 39°38'58", long 106°57'11", in SW¼NW¼ sec.5, T.5 S., R.85W., Eagle County, Hydrologic Unit 14010003, on right bank 30 ft downstream from bridge on U.S. Highways 6 and 24 at Gypsum and 150 ft downstream from Gypsum Creek.

DRAINAGE AREA.--945 mi².

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 2124: WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,275.11 ft, above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Transmountain diversions upstream from station (see elsewhere in this report). Transbasin diversions upstream from station from Robinson Reservoir, capacity, 2,520 acre-ft, to Tenmile Creek for mining development. Many small diversions for irrigation of hay meadows upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--44 years, 572 ft³/s; 414,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,020 ft³/s, May 25, 1984, gage height, 9.46 ft; minimum daily, 93 ft³/s, Sept. 16, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 9	0600	*3,210	*6.93				

Minimum daily, 93 ft³/s, Sept. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	181	120	146	135	135	148	242	1430	777	239	100
2	143	168	129	140	132	131	151	226	1280	736	241	100
3	138	163	128	154	125	135	158	229	1150	702	251	100
4	145	185	139	152	131	144	171	223	1510	914	227	98
5	151	190	167	121	144	142	184	220	2310	824	210	105
6	151	187	182	121	138	154	188	241	2600	834	206	152
7	150	188	177	116	134	135	184	324	2770	755	192	201
8	150	182	145	146	129	133	192	411	2840	888	178	158
9	139	184	163	167	112	138	209	387	2850	857	169	134
10	141	187	171	155	136	141	205	362	2760	709	158	136
11	140	184	133	153	128	144	190	434	2730	634	134	129
12	139	182	115	149	130	144	200	434	2700	560	136	117
13	144	180	120	144	134	141	206	384	2080	518	154	110
14	146	178	163	148	134	127	195	371	2130	501	162	105
15	154	172	173	142	121	129	203	435	2020	489	161	95
16	188	151	164	142	102	130	240	486	1730	441	163	93
17	191	167	176	134	134	127	256	415	1570	436	183	126
18	180	167	169	123	139	129	268	409	1530	391	193	206
19	167	167	176	131	125	129	278	413	1570	491	195	203
20	162	170	167	137	130	130	283	441	1440	462	177	184
21	175	168	162	124	127	139	295	488	1390	472	165	159
22	190	167	161	135	125	143	335	666	1320	458	162	150
23	190	163	164	129	125	155	356	878	1280	404	163	146
24	180	166	164	138	126	166	358	1320	1270	362	151	144
25	179	174	166	119	132	159	347	1490	1200	368	137	145
26	181	177	139	142	133	162	313	1550	1150	392	128	142
27	191	177	134	139	136	167	275	1440	1110	331	115	172
28	183	147	151	132	139	169	252	1480	1050	297	110	175
29	187	107	165	140	---	169	259	1760	952	278	100	200
30	177	103	156	150	---	161	249	1390	841	267	96	208
31	171	---	167	140	---	151	---	1380	---	251	97	---
TOTAL	5071	5082	4806	4309	3636	4459	7148	20929	52563	16799	5153	4293
MEAN	164	169	155	139	130	144	238	675	1752	542	166	143
MAX	191	190	182	167	144	169	358	1760	2850	914	251	208
MIN	138	103	115	116	102	127	148	220	841	251	96	93
AC-FT	10060	10080	9530	8550	7210	8840	14180	41510	104300	33320	10220	8520

CAL YR 1989 TOTAL 146993 MEAN 403 MAX 1990 MIN 103 AC-FT 291600
WTR YR 1990 TOTAL 134248 MEAN 368 MAX 2850 MIN 93 AC-FT 266300

09070500 COLORADO RIVER NEAR DOTSERO, CO

LOCATION.--Lat 39°38'38", long 107°04'38", in NW¼SE¼ sec.6, T.5 S., R.86 W., Eagle County, Hydrologic Unit 14010001, on left bank about 500 ft south of Interstate Highway 70, 1.5 mi west of Dotsero, and 1.5 mi downstream from Eagle River.

DRAINAGE AREA.--4,394 mi².

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,130 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 3, and Dec. 12 to Jan. 21. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, diversions for irrigation of 68,000 acres upstream from station, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--50 years, 2,121 ft³/s; 1,537,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,200 ft³/s, May 25, 1984, gage height, 14.20 ft; minimum daily, 350 ft³/s, Jan. 5, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,060 ft³/s at 1100 June 8, gage height, 5.86 ft; minimum daily, 555 ft³/s, Feb. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	852	660	740	678	717	908	1200	2880	1530	1370	1690
2	1100	828	682	740	645	724	956	1200	2700	1490	1400	1720
3	1090	813	640	790	638	765	1020	1200	2460	1520	1500	1730
4	1110	835	741	710	622	786	1100	1190	2770	1790	1480	1720
5	1160	857	773	650	675	805	1170	1250	3710	1840	1450	1790
6	1180	861	809	640	682	824	1250	1340	4280	1790	1430	1730
7	1230	868	783	650	652	762	1370	1510	4590	1610	1440	1670
8	1260	855	731	690	668	745	1450	1710	4610	1690	1440	1580
9	1290	855	804	800	592	749	1530	1650	4550	1920	1460	1540
10	1280	867	790	820	638	746	1490	1420	4340	1860	1470	1560
11	1250	878	805	800	669	752	1380	1440	4410	1760	1460	1620
12	1220	883	700	800	645	767	1380	1480	4410	1870	1530	1600
13	1180	877	760	790	682	757	1330	1400	3820	1740	1540	1520
14	1170	867	820	800	660	707	1360	1370	3800	1610	1540	1410
15	1180	827	880	800	615	700	1400	1460	3560	1560	1500	1240
16	1270	762	860	780	555	703	1520	1650	3260	1520	1470	1240
17	1280	797	900	760	645	693	1640	1650	2990	1550	1540	1300
18	1230	819	880	720	687	700	1640	1420	2830	1570	1600	1420
19	1180	798	900	740	682	714	1540	1330	2700	1590	1590	1430
20	1110	814	880	760	645	727	1480	1350	2420	1610	1570	1330
21	1080	804	860	740	638	758	1510	1530	2100	1610	1570	1250
22	1090	797	860	735	660	803	1500	1730	2090	1720	1530	1200
23	1100	777	860	797	630	813	1580	2010	2050	1630	1510	1090
24	1080	783	840	777	638	860	1580	2560	2010	1510	1550	1090
25	1080	825	800	728	675	857	1510	2970	2040	1490	1530	1080
26	1060	854	740	779	675	853	1470	3060	1960	1560	1550	1030
27	1060	840	720	734	703	897	1340	2790	1810	1440	1570	1030
28	1030	729	780	668	715	921	1220	2790	1730	1300	1550	1030
29	1010	570	840	690	---	984	1210	3120	1620	1270	1590	1040
30	875	600	800	778	---	954	1200	2860	1580	1370	1660	1060
31	852	---	860	701	---	913	---	2860	---	1360	1650	---
TOTAL	35197	24392	24758	23107	18309	24456	41034	56500	90080	49680	47040	41740
MEAN	1135	813	799	745	654	789	1368	1823	3003	1603	1517	1391
MAX	1290	883	900	820	715	984	1640	3120	4610	1920	1660	1790
MIN	852	570	640	640	555	693	908	1190	1580	1270	1370	1030
AC-FT	69810	48380	49110	45830	36320	48510	81390	112100	178700	98540	93300	82790

CAL YR 1989 TOTAL 532514 MEAN 1459 MAX 4100 MIN 570 AC-FT 1056000
WTR YR 1990 TOTAL 476293 MEAN 1305 MAX 4610 MIN 555 AC-FT 944700

09071300 GRIZZLY CREEK NEAR GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°43'00", long 107°18'35", in NE¼SW¼ sec.7, T.4 S., R.88 W., Garfield County, Hydrologic Unit 14010001, on left bank 0.5 mi west of Grizzly Cow Camp and 14 mi north of Glenwood Springs.

DRAINAGE AREA.--5.73 mi².

PERIOD OF RECORD.--September 1976 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 10,435 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 19, 1978, at site 600 ft upstream, at datum, 25.33 ft, higher.

REMARKS.--Estimated daily discharges: Oct. 26, 27, Nov. 6 to Dec. 4, Dec. 6 to Apr. 21, May 13-16, 22. Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 14.0 ft³/s; 10,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 364 ft³/s, June 5, 1986, gage height, 4.99 ft, maximum gage height observed, 8.63 ft, May 4, 1982 (backwater from ice); no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 85 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 22	2000	---	a*4.91	No other peak greater than base discharge.			
June 6	2000	*166	4.73				

No flow many days.
a Backwater from ice.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.93	.95	.62	.10	.00	.00	.00	.39	124	9.3	1.4	.69
2	.94	.84	.60	.04	.00	.00	.00	.46	107	7.2	1.3	.64
3	.91	.84	.56	.02	.00	.00	.00	.54	94	4.6	1.3	.64
4	1.2	.79	.52	.01	.00	.00	.00	.62	108	4.8	1.2	.61
5	1.3	.75	.52	.00	.00	.00	.00	.71	129	4.6	1.1	.66
6	1.1	.72	.48	.00	.00	.00	.00	.87	145	4.0	1.0	.74
7	1.1	.76	.46	.00	.00	.00	.00	2.5	151	3.5	.97	.67
8	1.1	.78	.42	.00	.00	.00	.00	3.1	155	3.6	.93	.65
9	1.0	.76	.39	.00	.00	.00	.00	3.0	141	3.9	.95	.99
10	.95	.72	.36	.00	.00	.00	.00	4.4	129	4.2	.92	.88
11	.84	.70	.35	.00	.00	.00	.00	5.1	115	3.2	.92	.65
12	.80	.74	.34	.00	.00	.00	.00	6.5	106	3.2	.92	.61
13	.84	.76	.34	.00	.00	.00	.00	8.2	94	2.5	.96	.58
14	.84	.72	.34	.00	.00	.00	.00	8.8	72	2.1	.99	.58
15	.91	.68	.31	.00	.00	.00	.00	9.4	55	2.3	.96	.58
16	1.0	.70	.28	.00	.00	.00	.00	9.8	46	2.3	.90	.58
17	1.0	.70	.27	.00	.00	.00	.00	6.5	40	2.3	1.2	.71
18	1.0	.68	.28	.00	.00	.00	.00	6.0	32	2.3	1.0	.79
19	1.1	.68	.28	.00	.00	.00	.00	5.7	28	2.3	.84	.85
20	1.1	.70	.28	.00	.00	.00	.00	6.3	27	2.2	.87	.80
21	.97	.74	.28	.00	.00	.00	.00	11	22	1.9	.99	.80
22	.97	.74	.25	.00	.00	.00	.01	16	18	1.9	.99	.74
23	.97	.72	.23	.00	.00	.00	.01	40	17	1.8	1.1	.68
24	.93	.70	.22	.00	.00	.00	.02	46	14	1.7	.85	.67
25	.91	.66	.21	.00	.00	.00	.08	60	13	2.5	.85	.69
26	.94	.68	.20	.00	.00	.00	.09	73	11	2.2	.96	.69
27	1.0	.72	.20	.00	.00	.00	.10	89	9.8	1.7	.65	.70
28	1.0	.72	.19	.00	.00	.00	.18	98	9.5	1.5	.67	.72
29	1.0	.70	.14	.00	---	.00	.28	97	8.3	1.5	.67	.79
30	.95	.64	.12	.00	---	.00	.34	83	7.2	1.5	.65	.78
31	.97	---	.12	.00	---	.00	---	89	---	1.4	.63	---
TOTAL	30.57	21.99	10.16	0.17	0.00	0.00	1.11	790.89	2018.8	94.0	29.64	21.16
MEAN	.99	.73	.33	.005	.000	.000	.037	25.5	67.3	3.03	.96	.71
MAX	1.3	.95	.62	.10	.00	.00	.34	98	151	9.3	1.4	.99
MIN	.80	.64	.12	.00	.00	.00	.00	.39	7.2	1.4	.63	.58
AC-FT	61	44	20	.3	.00	.00	2.2	1570	4000	186	59	42

CAL YR 1989 TOTAL 3669.03 MEAN 10.1 MAX 152 MIN .00 AC-FT 7280
WTR YR 1990 TOTAL 3018.49 MEAN 8.27 MAX 151 MIN .00 AC-FT 5990

09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°33'38", long 107°17'59", Garfield County, Hydrologic Unit 14010001, 100 yards downstream of No Name Creek and two miles above Glenwood Springs.

DRAINAGE AREA.--4,556 mi².

PERIOD OF RECORD.--December 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to current year.

WATER TEMPERATURE: December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1985.

REMARKS.--Discharge obtained by subtracting the flow in Roaring Fork River at Glenwood Springs (station 09085000) from the flow in the Colorado River below Glenwood Springs (station 09085100). Water-quality data collection was moved downstream to this site from previous site 09071100 on Dec. 12, 1985. Water-quality data collected at this site are considered equivalent to data collected at old site. Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,740 microsiemens Aug. 21, 1990; minimum, 210 microsiemens June 7, 1990.

WATER TEMPERATURE: Maximum, 22.5°C July 26, 1987; minimum, 0.0°C on many days during winters.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,740 microsiemens Aug. 21; minimum recorded, 210 microsiemens June 7.

WATER TEMPERATURE: Maximum 20.4°C July 2; minimum, 0.2°C Dec. 10-12 (may have been less during periods of missing record).

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT										
10...	1120	E1440	585	8.3	11.0	170	53	9.7	50	2
NOV										
15...	1150	E912	802	8.0	4.0	220	66	14	79	2
DEC										
13...	1150	E474	926	7.6	0.0	240	73	15	96	3
JAN										
31...	1000	E838	833	8.1	8.0	210	64	13	90	3
MAR										
21...	1140	E744	911	8.1	8.5	210	62	14	91	3
APR										
09...	1310	E1640	598	7.8	9.0	170	49	11	52	2
MAY										
16...	1030	E1800	534	7.7	10.0	160	48	10	48	2
JUN										
12...	1500	E4900	260	--	12.0	110	34	5.9	14	0.6
AUG										
01...	1345	E1460	625	8.2	18.0	180	53	11	54	2
24...	0905	E1660	518	7.8	16.0	150	48	8.3	47	2

E Estimated.

09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT 10...	2.6	95	--	71	0.30	6.8	--	0.35	--	<0.10
NOV 15...	2.9	117	120	110	0.30	10	472	0.64	--	<0.10
DEC 13...	2.8	133	130	140	0.30	11	549	0.75	--	0.19
JAN 31...	2.7	119	110	130	0.20	11	494	0.67	--	0.31
MAR 21...	2.9	115	110	140	0.30	9.7	499	0.68	--	--
APR 09...	2.6	93	68	59	0.20	8.8	307	0.42	--	0.10
MAY 16...	1.8	96	60	55	0.10	8.7	289	0.39	--	<0.10
JUN 12...	1.3	67	34	19	0.20	7.3	156	0.21	--	<0.10
AUG 01...	2.6	107	85	76	0.40	10	356	0.48	--	<0.10
24...	2.7	89	84	72	0.40	8.5	324	0.44	--	<0.10

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	605	773	800	---	797	860	775	627	338	583	606	490
2	634	779	---	---	811	851	777	629	345	594	599	480
3	640	798	---	---	852	845	769	635	369	603	584	476
4	636	792	916	---	871	837	738	627	364	689	557	477
5	612	811	923	---	879	836	708	619	297	526	559	473
6	601	803	842	---	874	819	671	582	251	565	563	497
7	604	784	807	---	845	826	622	557	237	579	566	533
8	605	786	831	---	831	853	590	509	236	611	551	507
9	588	791	891	---	845	863	581	480	236	604	551	509
10	566	788	860	---	870	868	572	509	245	571	542	521
11	567	781	850	---	832	872	592	534	241	617	542	507
12	566	774	889	---	823	869	611	504	256	638	527	500
13	577	776	---	---	825	856	615	511	285	583	525	516
14	592	782	---	---	833	858	603	538	310	594	530	530
15	595	794	---	---	861	880	592	538	324	608	519	576
16	592	810	---	---	869	885	576	513	341	611	541	592
17	587	831	---	---	905	894	543	502	357	646	534	588
18	593	817	---	---	895	898	516	534	365	641	517	582
19	601	816	---	---	871	894	524	575	365	651	532	584
20	611	811	---	---	865	886	527	583	386	607	511	568
21	632	813	---	---	873	882	521	544	410	599	965	601
22	652	804	---	---	879	871	524	514	431	585	571	614
23	653	808	---	---	871	857	507	455	452	578	539	660
24	644	799	---	---	889	850	488	374	464	589	532	678
25	645	807	---	---	877	834	502	322	468	602	539	671
26	650	773	---	---	881	829	509	310	483	604	541	689
27	660	774	---	---	871	836	535	315	497	594	506	706
28	670	750	---	---	865	802	595	322	511	634	509	710
29	668	834	---	---	---	783	621	304	521	658	505	709
30	705	919	---	---	---	759	615	311	543	637	487	718
31	758	---	---	---	---	763	---	340	---	619	482	---
MEAN	623	799	---	---	859	849	597	491	364	607	553	575

09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	---	---	4.6	3.7	.4	.3	---	---	1.5	1.2	4.3	2.2
2	---	---	4.5	2.9	.4	.3	---	---	1.6	.9	3.9	1.9
3	---	---	4.0	3.2	.5	.3	---	---	1.0	.6	4.2	2.6
4	---	---	4.3	3.2	.4	.4	---	---	1.3	.7	5.0	3.4
5	---	---	5.9	4.1	.5	.3	---	---	1.5	.8	5.0	3.5
6	---	---	7.4	5.7	1.0	.5	---	---	1.5	.8	4.1	3.0
7	---	---	7.1	5.8	1.2	.4	---	---	2.0	1.3	3.6	2.5
8	---	---	6.0	4.0	.7	.4	---	---	1.8	.8	4.0	2.4
9	---	---	5.4	4.2	.8	.4	---	---	1.3	.7	5.4	4.2
10	---	---	5.6	4.7	.9	.2	---	---	1.8	.8	6.1	4.6
11	---	---	6.6	5.5	.3	.2	---	---	2.1	1.4	5.9	5.1
12	---	---	6.1	4.9	.4	.2	---	---	2.5	1.4	5.4	4.4
13	---	---	5.9	4.9	---	---	---	---	2.7	1.8	4.6	3.8
14	10.8	9.6	5.6	4.3	---	---	---	---	2.1	1.1	3.7	2.4
15	11.3	10.3	4.8	3.0	---	---	---	---	1.1	.4	3.4	2.2
16	11.5	9.5	3.2	2.1	---	---	---	---	.7	.4	4.4	2.7
17	---	---	2.8	2.1	---	---	---	---	.7	.4	5.3	3.5
18	---	---	2.7	1.9	---	---	---	---	1.4	.5	6.2	4.7
19	---	---	2.6	1.9	---	---	---	---	1.5	.8	7.5	5.3
20	---	---	2.5	1.9	---	---	---	---	2.0	.9	8.3	6.6
21	---	---	3.0	2.2	---	---	---	---	2.4	1.3	9.5	7.5
22	---	---	3.1	2.1	---	---	---	---	2.6	1.2	10.0	7.8
23	---	---	3.0	2.0	---	---	---	---	2.3	1.1	10.2	8.3
24	---	---	3.0	2.3	---	---	---	---	2.8	1.3	10.0	8.1
25	---	---	3.9	2.9	---	---	---	---	3.2	1.8	9.8	7.8
26	---	---	4.4	3.2	---	---	---	---	3.4	1.9	10.4	8.4
27	7.9	6.9	3.2	2.1	---	---	---	---	4.3	2.6	9.5	8.3
28	7.8	6.1	2.0	.4	---	---	---	---	4.3	2.7	9.3	8.1
29	6.3	4.9	.6	.3	---	---	---	---	---	---	9.1	7.9
30	5.2	3.2	.5	.3	---	---	---	---	---	---	9.2	8.0
31	4.3	3.2	---	---	---	---	---	---	---	---	9.5	8.0
MONTH	---	---	7.4	.3	---	---	---	---	4.3	.4	10.4	1.9
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	10.1	8.4	8.3	7.1	11.9	9.9	20.1	18.9	17.6	16.6	17.4	15.4
2	10.8	9.0	10.5	8.5	10.6	8.2	20.4	19.3	17.4	16.5	18.7	16.9
3	11.8	9.8	11.6	10.5	12.9	9.7	20.1	17.6	17.2	15.9	19.0	17.8
4	11.8	10.5	11.3	10.5	13.7	12.2	18.8	17.5	18.0	16.8	19.2	18.1
5	10.9	9.9	12.1	10.9	13.7	11.9	19.2	18.3	18.3	16.5	19.3	18.1
6	11.1	10.1	13.1	11.8	13.0	11.5	19.3	18.7	18.8	17.9	18.8	17.3
7	10.7	9.2	13.4	12.2	12.7	10.9	19.5	18.4	19.2	17.9	18.1	17.3
8	10.7	9.2	12.9	10.8	13.1	11.2	18.6	17.5	19.4	17.7	18.2	17.1
9	9.8	8.3	10.6	9.3	13.1	11.9	18.6	17.3	18.5	17.1	---	---
10	9.2	7.6	10.9	9.9	12.9	11.8	18.9	17.9	18.6	17.7	---	---
11	9.8	8.9	11.3	10.1	12.7	11.5	19.8	18.7	18.1	16.9	17.4	16.3
12	10.8	9.4	10.2	9.3	12.7	11.8	20.2	19.3	18.3	16.8	17.6	16.4
13	10.9	9.0	11.0	10.1	13.9	11.4	20.2	18.7	17.6	16.3	18.3	16.6
14	10.2	8.8	11.7	11.0	13.9	12.4	19.0	17.9	17.8	16.6	18.5	17.1
15	11.3	10.2	11.7	10.7	13.9	12.2	19.0	18.1	17.6	17.0	18.7	17.3
16	11.8	10.4	10.7	9.8	13.8	12.2	19.3	18.4	18.5	16.7	18.8	17.1
17	12.0	11.1	11.4	10.3	14.5	12.0	19.3	18.1	18.4	17.2	17.7	16.4
18	11.6	10.6	12.2	11.4	14.8	13.1	20.3	19.1	17.5	16.4	16.6	15.1
19	11.8	10.9	12.0	11.4	14.9	13.5	19.4	18.4	17.6	16.2	15.4	14.7
20	11.8	10.5	12.3	11.4	14.9	13.0	20.0	19.3	17.6	16.7	15.5	14.1
21	12.1	11.3	12.9	11.7	15.6	14.3	19.8	18.0	17.8	16.6	15.3	14.0
22	12.0	11.1	13.4	12.9	15.9	14.9	18.8	17.6	18.2	16.6	16.1	14.7
23	12.3	11.4	13.6	12.7	16.9	15.4	18.2	16.8	16.9	15.1	16.6	15.4
24	11.8	10.8	13.7	12.3	17.3	16.4	17.6	16.6	17.0	16.1	17.0	15.9
25	11.2	9.8	12.2	10.6	18.2	17.0	18.8	17.5	17.0	15.9	16.8	15.4
26	10.0	9.2	12.0	10.3	18.3	17.3	19.2	18.5	17.1	16.0	17.6	16.1
27	9.4	7.8	12.0	9.7	18.6	17.6	19.5	18.5	17.5	15.9	17.2	15.8
28	8.4	7.6	12.2	10.9	18.3	17.5	19.6	18.6	17.9	16.4	16.6	15.1
29	8.0	7.0	12.0	10.1	18.8	18.1	19.3	17.7	18.1	16.6	16.1	14.7
30	7.7	6.8	11.2	9.2	19.2	18.4	17.9	16.6	18.2	16.6	16.1	14.6
31	---	---	11.9	10.3	---	---	18.4	17.1	18.0	16.5	---	---
MONTH	12.3	6.8	13.7	7.1	19.2	8.2	20.4	16.6	19.4	15.1	---	---

09073300 ROARING FORK RIVER ABOVE DIFFICULT CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°08'28", long 106°46'25", Pitkin County, Hydrologic Unit 14010004, on left bank in the White River National Forest at Difficult Creek Campground, 0.45 mi above Difficult Creek tributary and 4.25 mi southeast of Aspen.

DRAINAGE AREA.--75.8 mi².

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,120 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 31, Nov. 2, 9, 16, Nov. 27 to Dec. 3, Dec. 8, 11, 12, Jan. 4-6, 16-18, 21, 23, 25, 27, 28, Feb. 3, 6, 9, and Feb. 15-17. Records good except for estimated daily discharges, which are poor. Transmountain diversion 11 mi upstream through Twin Lakes Tunnel to Arkansas River basin since May 24, 1935 (35,600 acre-ft diverted, during current year, provided by U.S. Bureau of Reclamation). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--11 years, 130 ft³/s; 94,180 acre-ft/yr, including diversion by Twin Lakes tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,350 ft³/s, June 8, 1985, gage height, 5.10 ft, from rating curve extended above 910 ft³/s; minimum daily, 8.0 ft³/s, Jan. 11, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 928 ft³/s at 1030 June 11, gage height, 3.80 ft; minimum daily, 13 ft³/s, Feb. 9, 16, Mar. 6, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	18	16	17	15	14	16	31	173	98	43	29
2	25	19	16	18	15	14	17	30	142	92	51	29
3	26	20	17	18	15	14	18	30	143	93	45	28
4	25	19	18	16	15	14	19	30	199	99	40	29
5	25	18	18	17	15	14	19	31	294	92	39	29
6	24	18	18	18	15	13	19	40	363	109	37	35
7	23	17	18	17	15	13	21	55	392	84	34	31
8	22	17	17	17	15	14	22	57	409	85	34	30
9	22	18	18	17	13	14	22	54	473	83	39	29
10	21	18	17	16	15	14	20	58	579	76	38	28
11	22	18	17	17	15	14	22	66	584	67	38	26
12	21	18	15	16	15	14	24	53	466	63	40	25
13	20	18	18	16	15	14	23	51	289	60	48	25
14	19	17	18	17	15	14	24	53	313	57	50	25
15	20	17	18	16	15	14	31	59	271	55	60	24
16	23	18	17	15	13	14	35	56	209	52	57	24
17	22	19	18	15	15	17	37	51	203	51	65	30
18	27	19	18	14	15	14	34	56	224	47	62	34
19	26	17	18	17	15	14	35	56	252	49	54	39
20	27	18	18	17	15	14	34	65	219	45	52	31
21	28	18	18	16	15	14	42	74	205	44	50	36
22	27	16	16	16	15	15	46	109	218	41	46	35
23	26	16	18	17	15	16	50	131	186	39	44	34
24	25	17	18	18	14	16	52	171	199	39	38	33
25	21	18	17	18	15	16	47	168	166	47	35	33
26	21	17	18	16	15	16	44	167	152	41	33	30
27	19	16	18	14	15	17	38	160	142	38	32	30
28	19	14	18	15	14	17	35	172	135	35	32	36
29	17	15	18	16	---	17	36	196	122	34	31	41
30	17	16	18	15	---	16	33	166	110	35	30	36
31	17	---	18	15	---	16	---	176	---	39	30	---
TOTAL	707	524	543	507	414	457	915	2672	7832	1889	1327	924
MEAN	22.8	17.5	17.5	16.4	14.8	14.7	30.5	86.2	261	60.9	42.8	30.8
MAX	30	20	18	18	15	17	52	196	584	109	65	41
MIN	17	14	15	14	13	13	16	30	110	34	30	24
AC-FT	1400	1040	1080	1010	821	906	1810	5300	15530	3750	2630	1830

CAL YR 1989 TOTAL 14416.0 MEAN 39.5 MAX 216 MIN 9.0 AC-FT 28590
WTR YR 1990 TOTAL 18711 MEAN 51.3 MAX 584 MIN 13 AC-FT 37110

09073400 ROARING FORK RIVER NEAR ASPEN, CO

LOCATION.--Lat 39°10'48", long 106°48'05", Pitkin County, Hydrologic Unit 14010004, on right bank 25 ft upstream from private bridge, 115 ft upstream from Salvation ditch headgate, 1.0 mi southeast of Aspen, and 2.0 mi upstream from Hunter Creek.

DRAINAGE AREA.--108 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,014.01 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 25, 1968, at site 85 ft upstream, at datum 1.16 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 17, Dec. 8, 12, Jan. 4, 6, 7, 16-18, 21, 28, 29, Feb. 9, 16. Records good except for estimated daily discharges, which are poor. Transmountain diversion 14 mi upstream through Twin Lakes tunnel to Arkansas River basin since May 24, 1935 (35,600 acre-ft diverted, during current year, provided by U.S. Bureau of Reclamation). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--26 years, 148 ft³/s; 107,200 acre-ft/yr, including diversion by Twin Lakes tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,230 ft³/s, June 9, 1985, gage height, 5.29 ft; minimum daily, 12 ft³/s, Nov. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 970 ft³/s at 0430 June 11, gage height, 3.86 ft; minimum daily, 24 ft³/s, Nov. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	32	27	30	28	27	35	52	277	155	70	41
2	43	26	27	30	28	28	36	52	224	151	86	41
3	42	30	28	29	28	28	38	53	226	143	74	40
4	40	32	29	27	30	28	39	52	316	156	65	41
5	40	32	29	28	29	28	39	51	431	155	63	43
6	39	31	29	29	29	29	39	59	529	174	60	47
7	38	30	27	30	30	28	41	83	565	146	55	43
8	38	28	26	31	30	28	44	89	584	145	52	41
9	37	32	29	31	29	29	45	85	660	154	57	40
10	36	30	29	30	30	30	42	90	749	133	56	39
11	37	30	29	29	30	30	43	103	786	122	56	37
12	37	30	27	29	29	30	45	83	684	111	58	36
13	36	30	29	30	29	30	44	77	452	104	74	36
14	34	29	29	30	28	28	42	89	479	105	70	35
15	34	27	28	28	28	30	49	96	417	102	80	34
16	42	24	29	27	26	30	52	90	331	94	79	34
17	40	26	28	26	29	29	57	79	318	91	90	45
18	43	28	28	25	28	31	54	87	337	84	87	50
19	42	29	28	28	30	30	57	86	364	89	77	62
20	45	29	28	28	29	31	55	100	320	79	70	51
21	48	29	28	30	28	32	64	116	310	78	69	53
22	47	28	27	32	28	34	69	172	301	75	64	52
23	44	26	29	31	28	35	75	214	281	68	65	49
24	43	28	28	29	28	35	79	280	269	67	54	48
25	39	29	28	29	28	36	72	270	243	92	51	48
26	37	27	29	29	28	36	67	274	228	77	49	45
27	33	27	29	27	29	36	61	255	215	66	46	45
28	35	25	29	26	28	38	57	280	205	61	44	54
29	31	26	29	27	---	37	56	318	185	60	42	63
30	29	27	29	29	---	35	54	258	167	60	42	55
31	28	---	28	29	---	35	---	281	---	64	42	---
TOTAL	1206	857	876	893	802	971	1550	4274	11453	3261	1947	1348
MEAN	38.9	28.6	28.3	28.8	28.6	31.3	51.7	138	382	105	62.8	44.9
MAX	49	32	29	32	30	38	79	318	786	174	90	63
MIN	28	24	26	25	26	27	35	51	167	60	42	34
AC-FT	2390	1700	1740	1770	1590	1930	3070	8480	22720	6470	3860	2670

CAL YR 1989 TOTAL 26654 MEAN 73.0 MAX 378 MIN 22 AC-FT 52870
WTR YR 1990 TOTAL 29438 MEAN 80.7 MAX 786 MIN 24 AC-FT 58390

09074000 HUNTER CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°12'21", long 106°47'49", Pitkin County, Hydrologic Unit 14010004, on right bank 280 ft upstream from headgate of Red Mountain ditch, 1.5 mi upstream from mouth, and 1.5 mi northeast of Aspen.

DRAINAGE AREA.--41.1 mi².

PERIOD OF RECORD.--June 1950 to September 1956, September 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,610 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 1, 1969, at site 220 ft downstream, at different datum.

REMARKS.--Estimated daily discharges: Oct. 30 to Apr. 2, and July 12 to Aug. 7. Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station to Charles H. Boustead tunnel by feeder conduit. Several small diversions upstream from station for irrigation of hay meadows upstream from and downstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--16 years (water years 1951-1956, 1970-1979), 50.7 ft³/s; 36,730 acre-ft/yr, prior to diversion through Charles H. Boustead Tunnel; 11 years (water years 1980-90), 44.1 ft³/s; 31,950 acre-ft/yr, subsequent to diversions through Charles H. Boustead Tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s, June 8, 1985, gage height, 2.33 ft; from rating curve extended above 300 ft³/s, maximum gage height, 4.30 ft, Nov. 30, 1984 (backwater from ice); minimum daily discharge, 1.8 ft³/s, Dec. 20-22, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 806 ft³/s at 2330 June 8, gage height, 2.14 ft; minimum daily, 2.5 ft³/s, Nov. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	4.0	3.3	3.2	3.0	3.0	3.2	18	95	48	26	9.2
2	5.6	3.8	3.4	3.3	3.0	3.0	3.5	17	83	46	23	9.0
3	5.7	3.9	3.6	3.3	3.1	3.0	7.3	19	85	46	22	9.1
4	6.7	3.9	3.8	3.2	3.1	3.1	9.2	20	114	47	21	10
5	8.4	3.5	3.8	3.2	3.1	3.1	7.5	20	247	50	22	13
6	6.4	3.4	3.7	3.2	3.1	3.1	8.3	28	470	49	23	21
7	6.0	3.2	3.5	3.2	3.0	3.3	9.1	46	464	46	21	15
8	5.7	3.2	3.6	3.2	3.0	3.3	9.0	51	363	46	17	12
9	5.3	3.2	3.6	3.2	3.0	3.4	9.4	52	442	52	17	11
10	5.4	3.1	3.6	3.2	3.0	3.5	9.8	58	394	45	16	9.8
11	5.3	3.3	3.7	3.3	2.9	3.7	9.7	64	384	45	15	9.1
12	5.1	3.4	3.6	3.2	2.8	4.3	9.5	50	305	42	17	8.0
13	5.2	3.3	3.5	3.2	2.8	4.0	9.4	45	118	42	18	7.6
14	4.5	3.3	3.5	3.2	2.8	3.6	9.4	46	148	40	16	7.1
15	5.2	3.1	3.4	3.1	2.8	3.5	13	61	107	39	20	6.2
16	5.9	3.2	3.4	3.1	2.8	3.6	17	51	82	37	29	6.3
17	6.6	3.2	3.4	3.2	2.8	3.7	20	40	79	33	34	16
18	4.4	3.4	3.3	3.3	2.8	3.7	21	48	81	32	37	24
19	3.6	3.4	3.2	3.3	2.9	3.8	21	54	84	32	25	25
20	4.6	3.4	3.2	3.2	2.9	3.9	20	60	77	34	18	16
21	6.3	3.4	3.2	3.3	2.8	4.0	26	73	76	37	18	14
22	6.9	3.4	3.2	3.5	2.8	4.1	31	92	73	40	17	14
23	5.1	3.4	3.2	3.5	2.7	4.3	34	96	70	36	17	12
24	4.2	3.4	3.2	3.4	2.7	4.4	37	113	68	35	15	11
25	4.8	3.4	3.3	3.3	2.7	4.4	33	113	64	44	13	10
26	6.4	3.3	3.3	3.2	2.8	4.3	31	105	62	51	12	11
27	4.7	2.9	3.3	3.1	2.8	4.2	23	98	61	44	11	11
28	4.4	2.5	3.3	3.1	3.0	4.1	22	98	54	37	11	19
29	4.1	2.8	3.2	3.0	---	3.8	20	109	52	33	9.8	29
30	3.7	3.0	3.2	3.0	---	3.2	18	93	49	31	8.9	18
31	3.8	---	3.2	3.0	---	3.2	---	91	---	28	9.6	---
TOTAL	165.7	99.7	105.7	99.7	81.0	113.6	501.3	1929	4851	1267	579.3	393.4
MEAN	5.35	3.32	3.41	3.22	2.89	3.66	16.7	62.2	162	40.9	18.7	13.1
MAX	8.4	4.0	3.8	3.5	3.1	4.4	37	113	470	52	37	29
MIN	3.6	2.5	3.2	3.0	2.7	3.0	3.2	17	49	28	8.9	6.2
AC-FT	329	198	210	198	161	225	994	3830	9620	2510	1150	780

CAL YR 1989 TOTAL 9969.0 MEAN 27.3 MAX 230 MIN 2.5 AC-FT 19770
WTR YR 1990 TOTAL 10186.4 MEAN 27.9 MAX 470 MIN 2.5 AC-FT 20200

09074800 CASTLE CREEK ABOVE ASPEN, CO

LOCATION.--Lat 39°05'15", Long 106°48'42", Pitkin County, Hydrologic Unit 14010004, on right bank 0.4 mi downstream from Forest Service bridge, 0.4 mi upstream from Sandy Creek, and 7 mi south of Aspen.

DRAINAGE AREA.--32.2 mi.

PERIOD OF RECORD.--September 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 5 to Mar. 6, and June 30 to July 10.. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--21 years, 43.2 ft³/s; 31,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 559 ft³/s, June 30, 1984, gage height, 3.64 ft; maximum gage height, 3.88 ft, June 23, 1970; minimum daily discharge, 6.0 ft³/s, Jan. 7, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 10	2200	*460	*3.35	No other peak greater than base discharge.			
Minimum daily, 5.5 ft ³ /s, Jan. 28.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	11	12	7.5	8.0	9.5	11	9.3	99	110	33	20
2	21	11	12	8.5	7.0	9.5	11	9.4	80	95	35	19
3	21	11	12	8.0	6.0	9.5	11	9.4	90	90	31	19
4	21	11	12	7.0	7.0	9.5	11	9.1	146	95	29	19
5	20	11	13	7.0	8.0	9.0	11	8.6	195	75	28	20
6	19	11	14	7.5	7.0	9.5	11	8.9	230	72	28	20
7	19	11	13	7.5	8.5	10	11	11	216	70	27	19
8	18	11	12	8.5	8.0	9.9	11	17	246	85	26	19
9	18	11	13	9.0	7.0	10	11	19	261	95	25	18
10	17	11	13	8.0	9.0	10	11	20	316	88	25	18
11	16	11	9.5	7.5	8.5	10	11	22	312	82	25	17
12	17	11	9.0	7.5	8.5	10	11	21	218	75	27	17
13	16	11	12	8.0	8.5	10	11	22	159	69	35	16
14	15	11	13	8.0	8.5	10	11	25	175	65	32	16
15	15	11	13	8.0	8.5	10	11	26	155	59	30	15
16	16	11	11	7.5	7.5	10	11	26	125	59	29	16
17	15	11	10	7.0	8.5	10	10	25	136	60	29	22
18	14	11	12	6.0	8.5	10	10	26	159	54	30	23
19	14	11	11	7.5	8.0	10	10	26	164	51	27	26
20	13	11	10	7.0	9.0	10	10	28	155	50	26	24
21	13	12	10	6.5	8.5	10	9.5	34	161	49	25	23
22	13	12	11	6.5	8.0	10	9.6	56	159	43	25	22
23	13	12	9.5	7.5	8.5	10	9.7	80	164	41	25	21
24	13	12	9.0	8.0	9.0	10	10	95	165	40	24	21
25	13	12	8.0	7.0	9.5	10	10	86	161	54	23	20
26	13	12	7.5	8.0	9.5	10	9.9	93	162	46	22	20
27	12	11	8.5	7.0	9.5	11	9.8	95	169	40	21	19
28	12	12	8.5	5.5	9.5	11	9.3	112	151	37	21	23
29	12	12	9.5	7.5	---	11	9.6	111	133	35	20	22
30	12	12	8.5	7.5	---	11	9.3	89	120	33	20	21
31	11	---	7.5	8.0	---	11	---	97	---	31	21	---
TOTAL	483	339	334.0	231.5	231.5	311.4	312.7	1316.7	5182	1948	824	595
MEAN	15.6	11.3	10.8	7.47	8.27	10.0	10.4	42.5	173	62.8	26.6	19.8
MAX	21	12	14	9.0	9.5	11	11	112	316	110	35	26
MIN	11	11	7.5	5.5	6.0	9.0	9.3	8.6	80	31	20	15
AC-FT	958	672	662	459	459	618	620	2610	10280	3860	1630	1180

CAL YR 1989 TOTAL 13417.7 MEAN 36.8 MAX 198 MIN 7.2 AC-FT 26610
WTR YR 1990 TOTAL 12108.8 MEAN 33.2 MAX 316 MIN 5.5 AC-FT 24020

09075700 MAROON CREEK ABOVE ASPEN, CO

LOCATION.--Lat 39°07'25", long 106°54'17", Pitkin County, Hydrologic Unit 14010004, on left bank 0.3 mi upstream from Silver Queen Forest Service campground, 1.2 mi downstream from confluence of East and West Maroon Creeks, and 7.2 mi southwest of Aspen.

DRAINAGE AREA.--35.4 mi².

PERIOD OF RECORD.--September 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,720 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 28 to to Apr. 10. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Natural regulation by Maroon Lake. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--21 years, 67.1 ft³/s; 48,610 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 836 ft³/s, June 22, 1980, gage height, 3.39 ft, from rating curve extended above 350 ft³/s, but may have been higher during a period of indefinite stage-discharge relationship in June, 1984; maximum gage height, 4.53 ft, Feb. 3, 1972 (backwater from ice); minimum daily discharge, 9.0 ft³/s, Mar. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	0400	*424	*2.91	No other peak greater than base discharge.			

Minimum daily, 10 ft³/s, Dec. 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	25	16	13	16	17	14	18	96	211	66	38
2	32	25	17	16	15	17	14	18	88	204	65	37
3	32	24	17	16	12	17	14	18	88	196	63	37
4	33	24	17	12	13	17	14	18	129	184	61	36
5	33	24	18	12	15	16	14	18	168	184	60	37
6	32	24	17	13	13	16	14	18	192	181	58	36
7	32	24	16	13	16	15	14	19	221	169	56	35
8	32	24	14	15	15	14	14	20	273	173	54	36
9	32	24	16	15	12	13	14	21	287	182	53	34
10	31	24	16	14	16	13	14	21	344	165	53	34
11	30	23	10	13	15	13	14	22	375	155	52	34
12	30	23	10	13	14	13	14	22	353	147	51	33
13	30	23	16	13	14	13	14	22	326	135	50	33
14	30	23	17	14	14	13	14	22	328	121	49	33
15	30	23	17	13	14	13	15	23	301	111	49	33
16	31	23	15	13	12	13	15	24	273	106	49	33
17	29	23	12	13	14	13	16	23	267	101	49	33
18	29	23	16	11	14	13	16	24	266	99	48	33
19	29	22	16	15	13	13	17	23	267	93	47	33
20	29	22	15	14	16	13	17	23	260	89	46	33
21	29	22	15	12	15	13	17	24	252	87	45	34
22	28	22	16	12	14	13	18	25	246	84	44	33
23	28	22	15	14	14	13	18	28	242	82	43	33
24	28	22	15	15	15	13	18	37	242	80	43	33
25	28	22	13	13	17	13	18	44	239	80	42	32
26	28	22	13	15	17	14	18	50	242	78	42	32
27	28	22	15	13	17	14	18	54	239	74	41	32
28	27	21	15	11	17	14	18	67	232	71	41	31
29	27	17	17	15	---	14	19	80	221	68	40	30
30	27	14	15	15	---	14	18	78	217	66	39	30
31	25	---	13	16	---	14	---	83	---	66	38	---
TOTAL	921	676	470	422	409	434	472	987	7274	3842	1537	1011
MEAN	29.7	22.5	15.2	13.6	14.6	14.0	15.7	31.8	242	124	49.6	33.7
MAX	33	25	18	16	17	17	19	83	375	211	66	38
MIN	25	14	10	11	12	13	14	18	88	66	38	30
AC-FT	1830	1340	932	837	811	861	936	1960	14430	7620	3050	2010

CAL YR 1989 TOTAL 21165 MEAN 58.0 MAX 271 MIN 10 AC-FT 41980
WTR YR 1990 TOTAL 18455 MEAN 50.6 MAX 375 MIN 10 AC-FT 36610

09078600 FRYINGPAN RIVER NEAR THOMASVILLE, CO

LOCATION.--Lat 39°20'41", long 106°40'23", in NW¼NW¼ sec.21, T.8 S., R.83 W., Pitkin County, Hydrologic Unit 14010004, on right bank 400 ft upstream from private bridge, 400 ft downstream from North Fork, 1.6 mi southeast of Thomasville, and 1.7 mi northwest of Norrie.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,210 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 28 to Apr. 11. Records good except for estimated daily discharges, which are fair. Transmountain diversions upstream from station to Arkansas River basin through Busk-Ivanhoe tunnel since June 1925 and Charles H. Boustead tunnel since May 16, 1972.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--15 years, 95.3 ft³/s; 69,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft³/s, June 8, 1987, gage height, 4.50 ft; minimum daily, 10 ft³/s, Nov. 28, 1976, Jan. 2, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 690 ft³/s at 0015 June 9, gage height, 3.50 ft; minimum daily, 14 ft³/s, Feb. 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	24	19	18	16	17	34	73	204	176	69	33
2	25	19	19	19	16	17	36	74	200	133	75	32
3	23	22	19	19	16	18	38	80	200	130	74	32
4	28	29	19	17	15	18	41	81	257	136	63	33
5	29	28	20	16	15	18	41	84	325	104	63	42
6	26	27	21	16	15	19	40	116	388	124	57	64
7	26	24	22	16	15	20	43	177	410	117	51	49
8	25	23	20	16	16	20	46	172	416	150	49	41
9	25	28	21	18	15	22	48	146	415	127	49	37
10	25	26	21	17	15	23	50	163	461	110	47	36
11	24	26	19	17	15	23	54	173	409	122	46	34
12	24	25	19	17	16	22	58	138	344	106	53	31
13	23	25	19	17	16	21	56	138	255	113	63	29
14	23	21	20	17	16	19	55	147	242	122	51	29
15	25	19	20	17	15	19	72	165	212	111	51	28
16	34	19	20	16	14	21	86	147	216	109	61	28
17	31	26	20	16	14	21	97	130	246	120	67	46
18	28	20	20	16	15	23	97	156	216	110	75	59
19	24	21	20	16	15	23	102	144	222	169	64	55
20	28	22	20	16	15	25	99	156	212	113	55	43
21	32	22	20	16	16	27	122	181	230	115	57	43
22	30	20	20	16	16	28	129	199	214	105	54	43
23	28	20	21	16	17	28	137	223	211	106	54	38
24	28	21	21	16	17	29	144	250	223	97	48	38
25	28	22	19	16	16	29	128	236	213	130	44	40
26	30	23	19	16	16	29	113	223	220	117	40	38
27	25	23	19	15	16	30	97	204	215	93	37	38
28	27	20	19	15	17	31	88	212	204	84	36	50
29	25	19	19	15	---	31	84	236	206	75	34	60
30	20	19	19	16	---	31	80	197	208	74	33	47
31	21	---	18	16	---	31	---	212	---	72	34	---
TOTAL	816	683	612	510	436	733	2315	5033	7994	3570	1654	1216
MEAN	26.3	22.8	19.7	16.5	15.6	23.6	77.2	162	266	115	53.4	40.5
MAX	34	29	22	19	17	31	144	250	461	176	75	64
MIN	20	19	18	15	14	17	34	73	200	72	33	28
AC-FT	1620	1350	1210	1010	865	1450	4590	9980	15860	7080	3280	2410

CAL YR 1989 TOTAL 26941 MEAN 73.8 MAX 310 MIN 15 AC-FT 53440
WTR YR 1990 TOTAL 25572 MEAN 70.1 MAX 461 MIN 14 AC-FT 50720

09080190 RUEDI RESERVOIR NEAR BASALT, CO

LOCATION.--Lat 39°21'50", long 106°49'05", in NW¼ sec.18, T.8 S., R.84 W., Pitkin County, Hydrologic Unit 14010004, in gatehouse of Ruedi Dam just upstream from Rocky Fork Creek and 13 mi east of Basalt.

DRAINAGE AREA.--223 mi².

PERIOD OF RECORD.--May 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in May 1968; dam completed July 16, 1968. Capacity, 102,300 acre-ft, 1969 survey, between elevations 7,540.00 ft, sill of auxiliary outlet, and 7,766.00 ft, crest of spillway. Dead storage below elevation 7,540.00 ft, 61 acre-ft. Figures given are total contents.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 103,900 acre-ft, July 15, 1973, elevation, 7,767.56 ft; minimum after first filling, 48,000 acre-ft, May 13, 1971, elevation, 7,698.03 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 101,300 acre-ft, July 27, elevation, 7,764.89 ft; minimum contents, 73,100 acre-ft, Apr. 7, elevation, 7,733.47 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	7,752.76	89,700	-
Oct. 31.	7,746.84	84,400	-5,300
Nov. 30.	7,744.68	82,500	-1,900
Dec. 31.	7,742.07	80,300	-2,200
CAL YR 1989			+4,500
Jan. 31.	7,739.13	77,800	-2,500
Feb. 28.	7,736.32	75,500	-2,300
Mar. 31.	7,733.75	73,400	-2,100
Apr. 30.	7,736.26	75,400	+2,000
May 31.	7,744.78	82,600	+7,200
June 30.	7,762.53	98,900	+16,300
July 31.	7,764.71	101,100	+2,200
Aug. 31.	7,760.31	96,800	-4,300
Sept. 30.	7,755.56	92,300	-4,500
WTR YR 1990.			+2,600

09080400 FRYINGPAN RIVER NEAR RUEDI, CO

LOCATION.--Lat 39°21'56", long 106°49'30", in SE¼SE¼ sec.12, T.8 S., R.85 W., Eagle County, Hydrologic Unit 14010004, on right bank 0.4 mi downstream from Rocky Fork Creek and Ruedi Dam, 1.5 mi west of former site of Ruedi, and 12.5 mi east of Basalt.

DRAINAGE AREA.--238 mi².

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Datum of gage is 7,473.25 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Nov. 7, 1970, at site 2.0 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of hay meadows upstream from station. Transmountain diversions upstream from station to Arkansas River basin through Busk-Ivanhoe tunnel since June 1925 and Charles H. Boustead tunnel since May 16, 1972 (see elsewhere in this report). Flow regulated by Ruedi Reservoir (station 09080190) since May 18, 1968. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--23 years (water years 1968-90), 183 ft³/s; 132,600 acre-ft/yr, subsequent to completion of Ruedi Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,690 ft³/s, June 18, 1965, gage height, 5.16 ft, site and datum then in use; minimum daily, 16 ft³/s, Feb. 2, 1968 (result of storage in Ruedi Reservoir); minimum daily prior to construction of Ruedi Reservoir, 28 ft³/s, Mar. 4, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 195 ft³/s at 0015 Oct. 1, gage height, 1.84 ft; minimum daily, 75 ft³/s, Apr. 13, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	79	82	79	79	82	76	105	131	134	130	154
2	195	79	82	79	79	82	82	105	132	132	130	154
3	195	79	82	79	79	82	85	106	132	132	130	154
4	195	79	82	78	79	82	84	106	133	132	130	154
5	193	80	82	78	79	82	84	106	141	132	130	154
6	192	81	82	78	79	82	84	106	149	132	129	145
7	192	80	82	78	81	82	84	107	152	132	128	136
8	192	79	82	78	81	82	84	108	152	131	128	136
9	192	79	82	78	81	82	82	111	152	130	128	136
10	192	79	82	78	81	82	82	113	153	130	128	136
11	190	79	81	78	81	82	80	114	157	130	128	136
12	190	79	81	78	80	81	76	114	160	130	128	136
13	190	79	81	78	79	81	75	114	180	129	128	136
14	190	79	81	78	79	80	76	113	180	128	138	136
15	190	79	81	78	79	79	76	112	180	128	155	134
16	181	79	81	77	79	79	76	112	180	129	162	134
17	140	81	81	76	80	79	75	112	180	130	157	134
18	102	81	81	76	81	79	76	114	179	130	154	134
19	102	81	81	76	81	79	76	115	171	130	154	134
20	102	81	81	76	81	79	76	115	165	130	154	134
21	102	81	81	76	81	79	76	115	164	128	154	134
22	101	81	81	77	81	79	76	115	160	128	154	134
23	95	81	79	78	81	78	77	117	160	129	154	134
24	83	81	79	78	81	78	78	124	158	130	154	134
25	82	81	79	78	81	78	78	130	158	128	154	134
26	81	81	79	78	81	78	78	131	158	128	154	134
27	81	81	79	78	81	78	78	130	158	128	154	134
28	79	81	79	79	82	78	78	129	156	128	154	134
29	79	82	79	79	---	78	78	130	150	128	154	134
30	79	82	79	79	---	78	83	130	134	129	154	134
31	79	---	79	79	---	78	---	130	---	130	154	---
TOTAL	4451	2404	2503	2413	2247	2478	2369	3589	4715	4025	4443	4147
MEAN	144	80.1	80.7	77.8	80.2	79.9	79.0	116	157	130	143	138
MAX	195	82	82	79	82	82	85	131	180	134	162	154
MIN	79	79	79	76	79	78	75	105	131	128	128	134
AC-FT	8830	4770	4960	4790	4460	4920	4700	7120	9350	7980	8810	8230

CAL YR 1989 TOTAL 42396 MEAN 116 MAX 195 MIN 79 AC-FT 84090
WTR YR 1990 TOTAL 39784 MEAN 109 MAX 195 MIN 75 AC-FT 78910

09081600 CRYSTAL RIVER ABOVE AVALANCHE CREEK, NEAR REDSTONE, CO

LOCATION.--Lat 39°13'56", long 107°13'36", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.33, T.9 S., R.88 W., Pitkin County, Hydrologic Unit 14010004, on right bank 1.2 mi upstream from Avalanche Creek and 3.6 mi north of Redstone.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 6,905 ft, from river-profile map.

REMARKS.--No estimated daily discharges. Records good. A few small diversions for irrigation upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--35 years, 297 ft³/s; 215,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,180 ft³/s, June 25, 1983, gage height, 6.12 ft; minimum daily, 22 ft³/s, Dec. 5, 1955, Feb. 15, 1964, Jan 2, Feb. 17, 18, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 10	2400	*1,700	*4.24				

Minimum daily, 32 ft³/s, Jan. 28, Feb. 3, 9, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	61	42	36	39	46	60	140	715	612	124	69
2	60	57	42	42	37	46	66	144	556	558	129	69
3	57	60	42	43	32	45	79	153	566	532	120	69
4	71	55	44	35	34	46	99	162	845	551	114	73
5	65	54	48	36	39	43	103	174	1160	471	110	81
6	60	54	50	37	35	43	96	218	1310	468	106	94
7	59	54	46	38	40	41	104	290	1340	412	104	82
8	60	52	42	42	37	40	118	263	1350	466	100	73
9	58	56	47	43	32	42	130	236	1380	502	96	71
10	57	52	47	40	40	45	117	257	1420	432	94	78
11	55	52	35	39	38	48	117	298	1490	359	93	67
12	54	52	34	39	37	45	116	241	1370	318	94	63
13	52	51	44	40	37	43	117	211	1120	285	96	61
14	52	51	47	41	37	40	117	225	1190	255	95	60
15	59	48	48	40	36	42	140	285	1120	238	110	59
16	94	48	43	39	32	42	172	265	939	219	104	60
17	72	53	38	38	37	42	193	236	904	207	102	84
18	64	49	46	33	37	43	180	254	987	244	98	80
19	60	51	45	41	35	42	187	264	1030	231	92	103
20	61	50	43	39	41	45	191	320	957	205	91	85
21	62	49	43	35	39	51	222	384	968	196	105	81
22	70	48	45	35	38	56	248	532	949	178	96	78
23	67	48	42	40	39	64	252	664	935	163	92	75
24	64	49	41	41	41	64	244	792	921	154	85	71
25	60	47	37	36	45	61	209	740	878	192	80	72
26	64	50	36	41	45	59	186	744	866	169	76	71
27	62	47	40	36	46	64	167	712	852	153	74	67
28	66	41	41	32	45	64	154	801	785	142	73	73
29	61	34	45	39	---	61	154	840	697	135	71	80
30	54	39	41	38	---	59	145	644	634	131	69	74
31	57	---	36	40	---	56	---	662	---	127	70	---
TOTAL	1918	1512	1320	1194	1070	1528	4483	12151	30234	9305	2963	2223
MEAN	61.9	50.4	42.6	38.5	38.2	49.3	149	392	1008	300	95.6	74.1
MAX	94	61	50	43	46	64	252	840	1490	612	129	103
MIN	52	34	34	32	32	40	60	140	556	127	69	59
AC-FT	3800	3000	2620	2370	2120	3030	8890	24100	59970	18460	5880	4410

CAL YR 1989 TOTAL 85387 MEAN 234 MAX 1190 MIN 33 AC-FT 169400
WTR YR 1990 TOTAL 69901 MEAN 192 MAX 1490 MIN 32 AC-FT 138600

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°32'37", long 107°19'44", IN SW¼SE¼ sec.9, T.6 S., R.89 W., Garfield County, Hydrologic Unit 14010004, on left bank at Glenwood Springs, 2,100 ft, upstream from mouth.

DRAINAGE AREA.--1,451.mi².

PERIOD OF RECORD.--October 1905 to September 1909, September 1910 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1960, published as Roaring Fork at Glenwood Springs.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,720.73 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 20, 1915, nonrecording gage on highway bridge 800 ft downstream, at different datum. Nov. 20, 1915, to Oct. 26, 1917, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Jan. 6, 7. Records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 35,000 acres. Transmountain diversions to Arkansas River basin through Busk-Ivanhoe tunnel since 1925, Twin Lakes tunnel since 1935, and Charles H. Boustead tunnel since 1972. Natural flow of stream affected by storage in Ruedi Reservoir on Fryingpan River (station 09080190) since May 1968. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--65 years (water years 1906-9, 1911-71), 1,368 ft³/s; 991,100 acre-ft/yr prior to diversion through Charles H. Boustead tunnel; 19 years (water years 1972-90), 1,223 ft³/s, 886,100 acre-ft/yr, subsequent to diversions through Charles H. Boustead tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s, July 1, 1957, gage height, 8.65 ft; maximum gage height, 8.7 ft, June 14, 1921, from floodmarks; minimum discharge, 145 ft³/s, Jan. 21, 1935, gage height, 0.65 ft; minimum daily discharge, 179 ft³/s, Jan. 21, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,900 ft³/s at 0530 June 11, gage height, 5.38 ft; minimum daily 290 ft³/s, Apr. 28, May 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	542	548	461	390	372	331	338	348	1820	1880	518	414
2	539	544	457	423	349	324	343	335	1570	1820	520	406
3	533	551	457	423	319	324	353	320	1420	1790	522	400
4	546	567	466	407	311	336	373	295	1870	2000	491	393
5	558	571	488	413	353	335	369	290	2780	1720	484	404
6	560	576	498	420	328	347	358	290	3440	1780	466	444
7	551	574	490	420	350	333	352	446	3700	1640	438	419
8	550	566	444	424	338	322	381	500	3660	1720	421	392
9	551	579	465	415	309	323	451	457	3960	1920	412	382
10	549	581	473	390	338	335	438	446	4000	1750	408	391
11	554	570	444	394	341	339	411	531	4380	1560	399	386
12	564	557	477	384	334	351	399	511	4210	1450	385	371
13	550	540	508	387	338	345	387	459	3150	1370	383	358
14	568	538	464	395	333	319	381	441	3250	1280	400	358
15	578	521	474	391	327	325	385	529	3140	1190	439	353
16	672	497	455	376	296	318	429	608	2600	1070	460	341
17	617	528	434	365	330	315	463	536	2450	1010	474	393
18	543	514	467	359	340	322	476	521	2540	943	509	408
19	527	514	454	379	315	322	414	540	2720	1140	511	448
20	536	519	435	385	327	321	393	608	2560	1020	502	475
21	537	519	431	355	321	332	406	679	2570	991	559	478
22	537	511	432	356	320	356	461	960	2560	944	577	478
23	543	493	421	411	315	358	492	1210	2520	852	560	467
24	542	505	418	396	317	368	462	1680	2540	783	505	456
25	529	506	405	371	329	363	430	1680	2470	862	493	446
26	535	516	416	403	331	362	369	1690	2430	867	485	429
27	535	535	483	378	338	364	312	1590	2450	761	494	438
28	525	491	429	349	340	367	290	1740	2380	711	480	443
29	529	428	430	376	---	365	314	2060	2200	685	446	485
30	516	439	415	380	---	355	354	1710	1990	657	432	477
31	516	---	390	385	---	347	---	1620	---	586	418	---
TOTAL	17032	15898	13981	12100	9259	10524	11784	25630	83330	38752	14591	12533
MEAN	549	530	451	390	331	339	393	827	2778	1250	471	418
MAX	672	581	508	424	372	368	492	2060	4380	2000	577	485
MIN	516	428	390	349	296	315	290	290	1420	586	383	341
AC-FT	33780	31530	27730	24000	18370	20870	23370	50840	165300	76860	28940	24860

CAL YR 1989 TOTAL 302950 MEAN 830 MAX 2920 MIN 320 AC-FT 600900
WTR YR 1990 TOTAL 265414 MEAN 727 MAX 4380 MIN 290 AC-FT 526400

09085100 COLORADO RIVER BELOW GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°33'18", long 107°20'13", in NW¼NW¼ sec.9, T.6 S., R.89W., Garfield County, Hydrologic Unit 14010005, on left bank 0.6 mi downstream from Roaring Fork River and 1.0 mi northwest of Post Office in Glenwood Springs.

DRAINAGE AREA.--6,013 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,700.75 ft above National Geodetic Vertical Datum of 1929 (Colorado State Highway Department benchmark).

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation of 110,000 acres. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 3,470 ft³/s; 2,514,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,500 ft³/s, May 25, 1984, gage height, 12.49 ft; minimum daily, 870 ft³/s, Feb. 11, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,810 ft³/s at 0900 June 11, gage height, 7.17 ft; minimum daily, 948 ft³/s, Feb. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1790	1570	1390	1140	1180	1140	1320	1650	4990	3400	2090	2190
2	1790	1560	1310	1160	1150	1140	1370	1680	4540	3340	2130	2240
3	1770	1530	1110	1220	1030	1230	1440	1630	4100	3280	2240	2250
4	1790	1560	1210	1080	1000	1180	1540	1620	4780	3740	2220	2240
5	1930	1570	1320	1020	1090	1310	1590	1630	6640	3620	2170	2310
6	1890	1560	1450	1010	1070	1240	1680	1740	8100	3590	2140	2360
7	1940	1610	1400	1020	1130	1240	1740	2010	8670	3350	2090	2240
8	1980	1550	1250	1150	1140	1200	1860	2330	8670	3400	2100	2130
9	2020	1640	1250	1270	1030	1140	2070	2280	8910	3790	2080	2090
10	2030	1500	1360	1280	1110	1150	2060	2060	8730	3640	2090	2090
11	2030	1620	1230	1290	1140	1230	1920	2110	9180	3320	2070	2140
12	2050	1550	1080	1260	1110	1210	1880	2190	8940	3350	2120	2120
13	1980	1600	1020	1230	1160	1150	1830	2060	7300	3150	2130	2050
14	1990	1530	1280	1240	1140	1300	1840	2010	7220	2930	2130	1980
15	2010	1490	1430	1230	1080	1160	1850	2140	6730	2770	2150	1830
16	2170	1420	1370	1200	948	1120	2040	2440	5850	2620	2110	1730
17	2170	1440	1210	1180	1030	1100	2210	2370	5540	2560	2170	1850
18	2060	1470	1320	1130	1140	1120	2270	2180	5480	2530	2280	1970
19	1990	1450	1240	1150	1130	1120	2130	2120	5620	2680	2250	2080
20	1890	1480	1270	1200	1120	1120	2020	2120	5070	2680	2210	2060
21	1840	1440	1300	1120	1090	1130	2070	2360	4880	2600	2290	1920
22	1860	1430	1380	1050	1110	1150	2110	2840	4750	2680	2240	1870
23	1870	1490	1300	1100	1090	1240	2220	3370	4650	2570	2190	1730
24	1850	1450	1240	1120	1100	1300	2220	4330	4610	2390	2150	1710
25	1840	1460	1220	1050	1110	1310	2110	4780	4500	2400	2140	1680
26	1830	1520	1160	1140	1150	1330	2010	5030	4380	2500	2130	1620
27	1810	1450	1130	1110	1150	1390	1870	4780	4290	2360	2180	1640
28	1760	1410	1190	1010	1150	1380	1680	4870	4130	2210	2130	1650
29	1750	1170	1310	1080	---	1430	1650	5450	3860	2070	2150	1690
30	1590	1220	1270	1110	---	1410	1670	4920	3610	2190	2190	1690
31	1550	---	1170	1200	---	1340	---	4740	---	2130	2180	---
TOTAL	58820	44740	39170	35550	30878	38010	56270	87840	178720	89840	66940	59150
MEAN	1897	1491	1264	1147	1103	1226	1876	2834	5957	2898	2159	1972
MAX	2170	1640	1450	1290	1180	1430	2270	5450	9180	3790	2290	2360
MIN	1550	1170	1020	1010	948	1100	1320	1620	3610	2070	2070	1620
AC-FT	116700	88740	77690	70510	61250	75390	111600	174200	354500	178200	132800	117300

CAL YR 1989 TOTAL 868082 MEAN 2378 MAX 7120 MIN 926 AC-FT 1722000
WTR YR 1990 TOTAL 785928 MEAN 2153 MAX 9180 MIN 948 AC-FT 1559000

09089500 WEST DIVIDE CREEK NEAR RAVEN, CO

LOCATION.--Lat 39°19'52", long 107°34'46", in NE¼SW¼ sec.29, T.8 S., R.91 W., Mesa County, Hydrologic Unit 14010005, on left bank 10 ft, downstream from private road bridge, 0.8 mi upstream from Brook Creek, 8 mi south of Raven, and 16 mi south of Silt.

DRAINAGE AREA.--64.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,050 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 4 to Mar. 19. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by water imported from Thompson Creek (Roaring Fork basin), Muddy Creek (Muddy Creek basin), and Buzzard Creek (Plateau Creek basin).

AVERAGE DISCHARGE.--35 years; 34.8 ft³/s; 25,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft³/s, May 14, 1984, gage height, 5.83 ft, from rating curve extended above 670 ft³/s; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 24	2400	*153	*3.89				
No flow many days.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	1.3	.72	.78	.84	1.6	6.7	27	91	8.5	.65	.00
2	.44	1.0	.74	.80	.76	1.6	8.0	28	71	8.2	.68	.00
3	.42	1.1	.76	.88	.70	1.6	11	30	68	8.0	.79	.00
4	.62	1.0	.84	.76	.78	1.5	13	31	89	14	.57	.00
5	.75	.70	1.0	.72	.82	1.4	10	34	115	8.2	.43	.21
6	1.0	.70	1.1	.74	.70	1.3	9.4	50	117	7.7	.28	.40
7	.87	.70	.96	.80	.78	1.2	12	68	120	6.8	.09	.02
8	.75	.72	.92	.88	.68	1.2	15	64	115	9.5	.04	.09
9	.68	.74	1.0	.88	.66	1.0	18	55	108	26	.02	.07
10	.68	.68	1.1	.82	.76	1.0	12	56	106	20	.01	.02
11	.64	.64	.92	.80	.70	.92	13	61	105	8.8	.00	.02
12	.60	.68	.92	.80	.68	.90	17	48	99	5.3	.00	.01
13	.70	.68	1.0	.86	.68	.92	17	43	85	3.5	.00	.00
14	.66	.62	1.2	.88	.68	1.0	17	53	70	2.9	.00	.00
15	.71	.58	1.0	.88	.64	1.1	25	68	60	2.6	.00	.00
16	2.2	.60	.84	.80	.62	1.1	31	62	49	2.2	.95	.00
17	2.1	.64	.84	.76	.72	1.2	33	55	41	1.9	2.3	.00
18	1.5	.62	.88	.76	.66	1.3	31	57	37	1.6	1.5	.70
19	1.3	.62	.84	.90	.70	1.4	34	56	35	1.8	1.1	.98
20	1.1	.66	.84	.80	.78	4.3	33	65	32	1.9	.59	1.2
21	1.2	.68	.90	.72	.76	4.7	39	82	30	1.9	.33	.64
22	1.3	.68	.92	.70	.82	6.3	48	102	27	2.1	.18	.39
23	1.4	.68	.82	.72	1.0	7.6	58	109	25	1.5	.26	.23
24	1.3	.70	.78	.80	1.1	7.4	55	125	23	1.2	.50	.13
25	1.2	.72	.74	.76	1.4	7.8	44	123	21	4.0	.18	.16
26	1.2	.78	.76	.82	1.4	8.3	37	113	19	8.2	.03	.10
27	1.3	.78	.78	.72	1.4	8.6	30	91	17	2.8	.00	.07
28	1.3	.72	.82	.78	1.5	7.9	28	87	14	1.6	.00	.05
29	1.2	.66	.96	.80	---	7.4	32	97	11	1.1	.00	.14
30	.93	.68	.90	.82	---	6.7	28	78	9.6	.97	.00	.63
31	1.0	---	.80	.90	---	5.6	---	75	---	.76	.00	---
TOTAL	31.48	22.06	27.60	24.84	23.72	105.84	765.1	2093	1809.6	175.53	11.48	6.26
MEAN	1.02	.74	.89	.80	.85	3.41	25.5	67.5	60.3	5.66	.37	.21
MAX	2.2	1.3	1.2	.90	1.5	8.6	58	125	120	26	2.3	1.2
MIN	.42	.58	.72	.70	.62	.90	6.7	27	9.6	.76	.00	.00
AC-FT	62	44	55	49	47	210	1520	4150	3590	348	23	12

CAL YR 1989 TOTAL 7805.74 MEAN 21.4 MAX 200 MIN .05 AC-FT 15480
WTR YR 1990 TOTAL 5096.51 MEAN 14.0 MAX 125 MIN .00 AC-FT 10110

09089500 WEST DIVIDE CREEK NEAR RAVEN, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- May 1986 to September 1990 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 16...	1045	0.36	522	8.1	0.0	11.8	220	65	14	25	0.7	1.4
APR 20...	1100	32	244	8.0	4.5	10.8	110	37	4.8	9.5	0.4	0.9
MAY 17...	1120	57	211	7.9	4.5	10.3	99	33	4.1	7.3	0.3	0.8
AUG 23...	1000	0.28	354	8.3	10.0	8.8	160	46	11	19	0.7	1.5

DATE	ALKA-LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS- SOLVED (MG/L AS CL)	FLUO-RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
NOV 16...	237	29	9.2	0.2	12	298	0.41	0.29	0.02	--	<0.1	--
APR 20...	118	8.6	2.5	0.1	9.0	143	0.19	12.4	0.04	--	<0.1	--
MAY 17...	106	4.6	3.5	<0.1	9.2	126	0.17	19.3	<0.01	<0.01	<0.1	<0.1
AUG 23...	174	15	6.5	0.7	7.5	212	0.29	0.16	<0.01	--	<0.1	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTH- TOTAL (MG/L AS P)	PHOS- PHORUS ORTH- DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
NOV 16...	0.01	--	0.59	--	0.6	--	<0.01	--	0.01	--	3.0	3.2
APR 20...	0.05	--	--	--	<0.2	--	0.09	--	0.02	--	5.5	4.4
MAY 17...	0.09	0.01	0.31	0.29	0.4	0.3	0.12	0.02	0.12	<0.01	5.4	4.0
AUG 23...	0.04	--	0.46	--	0.5	--	0.02	--	0.02	--	4.2	2.6

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 16...	1045	--	--	--	--	--	10	--	--	--	--
APR 20...	1100	--	--	--	--	--	<10	--	--	--	--
MAY 17...	1120	4300	<1	200	<10	20	<10	<1	5	2	4
AUG 23...	1000	--	--	--	--	--	<10	--	--	--	--

09089500 WEST DIVIDE CREEK NEAR RAVEN, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
NOV 16...	--	24	--	--	--	--	--	--	--	--	--
APR 20...	--	48	--	--	--	--	--	--	--	--	--
MAY 17...	4200	51	3	120	0.10	<1	5	<1	<1	170	20
AUG 23...	--	18	--	--	--	--	--	--	--	--	--

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 13...	1005	0.75	424	4.5	JUN 01...	1200	84	160	8.0
DEC 14...	0945	1.2	479	0.0	12...	1130	104	124	11.0
FEB 01...	1020	1.0	453	0.0	28...	1205	15	173	17.0
MAR 22...	1005	2.4	387	1.0	AUG 02...	1135	0.64	280	14.0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 16...	1045	0.36	11	0.01	--
APR 20...	1100	32	339	29	--
20...	1210	30	323	26	94
MAY 17...	1120	57	238	36	80
JUN 01...	1225	85	711	163	82
12...	1140	104	593	157	81
13...	1245	82	463	103	84
28...	1220	15	31	1.3	--
AUG 02...	1200	0.64	38	0.07	--
23...	1000	0.28	35	0.03	--

09093700 COLORADO RIVER NEAR DE BEQUE, CO

LOCATION.--Lat 39°21'45", long 108°09'07", in NE¼SW¼ sec.7, T.8 S., R.96 W., Mesa County, Hydrologic Unit 14010006, on left bank 3.0 mi downstream from Alkali Creek and 3.8 mi northeast of DeBeque.

DRAINAGE AREA.--7,370 mi².

PERIOD OF RECORD.--Streamflow records, October 1966 to current year. Water-quality data available, August 1973 to September 1982. Sediment data available, October 1974 to September 1976.

GAGE.--Water-stage recorder. Elevation of gage is 4,940 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 13 to Jan. 28, Feb. 14 to Mar. 1. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation of about 158,000 acres. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--24 years, 3,815 ft³/s; 2,764,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,200 ft³/s, May 26, 1984, gage height, 14.83 ft; minimum daily, 914 ft³/s, Dec. 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,000 ft³/s at 1830 June 11, gage height, 8.14 ft; minimum daily, 1,050 ft³/s, Jan. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1830	1620	1480	1190	1230	1220	1450	1710	5740	3410	1960	2000
2	1740	1620	1530	1160	1220	1250	1450	1680	5610	3220	1950	2040
3	1760	1580	1400	1190	1180	1250	1500	1670	4990	3110	2030	2050
4	1760	1580	1330	1300	1120	1330	1590	1660	5060	3380	2070	2040
5	1800	1610	1430	1070	1140	1270	1660	1670	6650	3610	2030	2090
6	1830	1620	1530	1050	1170	1390	1730	1710	8570	3450	1980	2150
7	1870	1630	1580	1080	1160	1350	1770	1880	9720	3400	1950	2080
8	1900	1620	1510	1090	1210	1290	1900	2200	9740	3150	1910	1990
9	1910	1610	1390	1190	1180	1300	2190	2450	9930	3570	1880	1910
10	1920	1640	1430	1310	1140	1260	2200	2270	9630	3760	1880	1880
11	1910	1590	1500	1320	1190	1270	2050	2140	10400	3370	1900	1900
12	1930	1640	1360	1330	1210	1360	1970	2320	10100	3230	1880	1940
13	1920	1600	1150	1300	1190	1290	1950	2250	8970	3140	1940	1890
14	1900	1620	1120	1270	1260	1290	1900	2090	8060	2930	1950	1820
15	1920	1550	1340	1260	1220	1360	1900	2150	7710	2740	1970	1770
16	2090	1540	1470	1240	1150	1260	1940	2520	6820	2600	1970	1610
17	2130	1540	1420	1180	1120	1260	2160	2520	6260	2490	2010	1660
18	2050	1530	1290	1160	1160	1250	2310	2430	6060	2430	2080	1730
19	1950	1550	1400	1110	1230	1270	2210	2250	6090	2490	2050	1830
20	1920	1540	1300	1100	1220	1270	2090	2240	5800	2580	2060	1880
21	1810	1670	1350	1100	1200	1280	2060	2350	5360	2500	2070	1810
22	1810	1470	1340	1100	1180	1280	2130	2810	5190	2510	2050	1740
23	1830	1500	1440	1090	1190	1300	2220	3560	4990	2490	2070	1680
24	1840	1600	1350	1140	1170	1390	2330	4640	4900	2330	1990	1600
25	1810	1550	1290	1170	1210	1420	2260	5520	4800	2390	1980	1590
26	1820	1580	1280	1090	1220	1420	2120	5820	4570	2340	1940	1580
27	1810	1660	1200	1180	1260	1470	2000	5790	4460	2310	1960	1520
28	1780	1580	1210	1170	1240	1480	1870	5620	4280	2130	1990	1530
29	1760	1460	1250	1140	---	1500	1710	6040	3970	2010	1950	1540
30	1730	1330	1400	1180	---	1560	1750	6160	3650	1970	1950	1560
31	1590	---	1300	1210	---	1490	---	5460	---	2040	1980	---
TOTAL	57630	47230	42370	36470	33370	41380	58370	95580	198080	87080	61380	54410
MEAN	1859	1574	1367	1176	1192	1335	1946	3083	6603	2809	1980	1814
MAX	2130	1670	1580	1330	1260	1560	2330	6160	10400	3760	2080	2150
MIN	1590	1330	1120	1050	1120	1220	1450	1660	3650	1970	1880	1520
AC-FT	114300	93680	84040	72340	66190	82080	115800	189600	392900	172700	121700	107900

CAL YR 1989 TOTAL 927030 MEAN 2540 MAX 7960 MIN 1000 AC-FT 1839000
WTR YR 1990 TOTAL 813350 MEAN 2228 MAX 10400 MIN 1050 AC-FT 1613000

09095500 COLORADO RIVER NEAR CAMEO, CO

LOCATION.--Lat 39°14'20", long 108°16'00", in SW¼SW¼ sec.30, T.9 S., R.97 W., Mesa County, Hydrologic Unit 14010006, on left bank 100 ft north of Interstate 70, 0.5 mi upstream from Jackson Canyon, 5.9 mi upstream from Grand Valley project diversion dam, and 7 mi northeast of Cameo.

DRAINAGE AREA.--8,050 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WRD Colo. 1973: 1970.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,813.73 ft above National Geodetic Vertical Datum of 1929. (Levels by Colorado Department of Highways). Prior to Oct. 10, 1934, nonrecording gage on river and water-stage recorder on Highline Canal, about 10 mi downstream at different datum. Oct. 10, 1934, to Feb. 27, 1958, water-stage recorder at site 3.0 mi downstream at datum 22.55 ft. lower.

REMARKS.--Estimated daily discharges: Oct. 4-6, Nov. 28 to Dec. 6, and Dec. 13 to Jan. 28. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversion for irrigation of about 160,000 acres.

AVERAGE DISCHARGE.--57 years, 3,894 ft³/s; 2,821,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,300 ft³/s, May 26, 1984, gage height, 14.36 ft, minimum daily, 700 ft³/s, Dec. 29, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,700 ft³/s at 2030 June 11, gage height, 7.59 ft, maximum gage height, 8.18 ft, Jan. 9 (backwater from ice); minimum daily discharge, 1,060 ft³/s, Jan. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1900	1620	1490	1200	1390	1350	1410	1700	5320	3530	2070	2070
2	1770	1620	1540	1170	1390	1340	1380	1670	5260	3350	2050	2130
3	1770	1600	1420	1200	1330	1320	1430	1680	4620	3250	2130	2150
4	1790	1580	1340	1310	1200	1410	1510	1650	4670	3480	2180	2130
5	1820	1610	1440	1080	1210	1340	1590	1660	6390	3710	2120	2180
6	1840	1620	1530	1060	1280	1500	1650	1710	8640	3570	2080	2260
7	1890	1630	1550	1090	1250	1440	1720	1860	9780	3540	2030	2210
8	1930	1630	1480	1100	1340	1390	1820	2200	10200	3320	1980	2100
9	1960	1600	1330	1200	1310	1350	2150	2480	10400	3660	1960	2000
10	1990	1680	1360	1320	1210	1290	2140	2350	10100	3880	1950	1970
11	1990	1570	1510	1330	1290	1300	2050	2190	10900	3560	1970	1990
12	1990	1660	1380	1340	1320	1400	1940	2350	10600	3380	1950	2050
13	2000	1610	1160	1310	1300	1360	1880	2340	9290	3320	2030	2010
14	1950	1630	1130	1280	1340	1300	1850	2200	7970	3150	2040	1950
15	1970	1550	1350	1270	1300	1410	1860	2210	7710	2950	2070	1900
16	2120	1530	1480	1250	1230	1290	1860	2570	6830	2860	2030	1750
17	2180	1510	1430	1200	1180	1260	2020	2620	6140	2760	2090	1780
18	2120	1520	1300	1170	1240	1240	2180	2530	5890	2700	2150	1860
19	2010	1540	1410	1130	1320	1240	2160	2370	5920	2780	2160	1980
20	1970	1530	1310	1130	1310	1240	2040	2350	5690	2860	2160	2060
21	1860	1630	1360	1120	1290	1240	1980	2420	5160	2810	2150	2010
22	1870	1460	1350	1110	1270	1240	2050	2820	4990	2770	2120	1910
23	1860	1500	1450	1100	1280	1260	2130	3430	4810	2770	2130	1840
24	1880	1590	1360	1150	1260	1340	2230	4350	4720	2600	2050	1740
25	1850	1540	1300	1190	1290	1380	2180	5520	4630	2660	2030	1730
26	1860	1560	1290	1150	1290	1390	2080	5910	4450	2530	1980	1710
27	1860	1650	1210	1190	1340	1410	1970	5880	4350	2510	1990	1620
28	1820	1600	1220	1200	1360	1450	1840	5600	4220	2310	2030	1630
29	1780	1490	1260	1240	---	1450	1680	5900	4040	2160	1980	1650
30	1770	1360	1410	1330	---	1530	1690	6040	3750	2070	2000	1700
31	1610	---	1310	1350	---	1450	---	5070	---	2140	2060	---
TOTAL	58980	47220	42460	37270	36120	41910	56470	95630	197440	92940	63720	58070
MEAN	1903	1574	1370	1202	1290	1352	1882	3085	6581	2998	2055	1936
MAX	2180	1680	1550	1350	1390	1530	2230	6040	10900	3880	2180	2260
MIN	1610	1360	1130	1060	1180	1240	1380	1650	3750	2070	1950	1620
AC-FT	117000	93660	84220	73930	71640	83130	112000	189700	391600	184300	126400	115200

CAL YR 1989 TOTAL 933340 MEAN 2557 MAX 8050 MIN 1050 AC-FT 1851000
WTR YR 1990 TOTAL 828230 MEAN 2269 MAX 10900 MIN 1060 AC-FT 1643000

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1933 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1935 to current year.

WATER TEMPERATURES: April 1949 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1982.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,970 microsiemens Jan. 19, 1940; minimum, 230 microsiemens June 2, 3, 1984.

WATER TEMPERATURES: Maximum, 25.8°C July 22, 1989; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,530 microsiemens Dec. 15; minimum, 280 microsiemens June 14-16.

WATER TEMPERATURES: Maximum recorded, 23.4°C Aug. 8, 10, and Sept. 4; minimum, 0.0°C many days in winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT										
04...	1400	1780	1070	8.3	13.0	240	71	16	120	3
NOV										
07...	1300	1630	1250	8.4	6.5	300	84	21	140	4
DEC										
06...	1200	1420	1410	8.3	1.5	310	88	22	170	4
FEB										
21...	1400	1290	1370	8.4	2.5	280	79	20	170	4
MAR										
21...	1200	1230	1350	8.2	9.5	280	78	21	170	4
APR										
18...	1400	2260	916	8.2	12.5	200	57	14	98	3
MAY										
23...	1000	3470	740	8.1	14.5	210	61	13	71	2
JUN										
06...	1200	8090	377	8.2	15.0	120	36	7.4	28	1
JUL										
11...	1000	3540	660	8.2	20.5	200	59	13	63	2
AUG										
10...	1100	2010	922	8.6	21.5	220	66	14	110	3
SEP										
05...	1130	2190	858	8.1	20.0	220	63	14	97	3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT										
04...	4.0	135	150	180	0.3	6.0	628	0.85	3020	<0.10
NOV										
07...	4.0	152	180	190	0.3	6.4	717	0.97	3150	<0.10
DEC										
06...	4.6	165	190	220	0.3	9.0	804	1.09	3080	0.33
FEB										
21...	3.7	151	180	220	0.3	7.0	771	1.05	2690	0.18
MAR										
21...	4.7	149	170	230	0.2	7.3	771	1.05	2560	0.20
APR										
18...	3.2	117	110	140	<0.1	7.5	500	0.68	3050	0.10
MAY										
23...	3.1	124	94	95	0.1	7.7	419	0.57	3930	<0.10
JUN										
06...	1.6	88	45	36	0.2	6.4	214	0.29	4680	0.20
JUL										
11...	2.7	123	89	78	0.3	9.5	388	0.53	3710	<0.10
AUG										
10...	3.6	126	120	150	0.6	6.6	546	0.74	2970	<0.10
SEP										
05...	3.6	114	110	130	0.4	7.5	494	0.67	2840	<0.10

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					MAY				
11...	1200	1990	1000	11.5	09...	1100	2550	860	11.0
19...	1100	2010	954	8.0	16...	0900	2530	895	12.0
25...	1200	1820	1060	9.5	30...	1300	6080	449	12.5
NOV					JUN				
01...	1300	1660	1210	5.5	13...	1100	9240	344	12.5
15...	1300	1540	1180	4.0	20...	1000	5460	470	14.5
22...	1200	1520	1270	4.0	29...	1000	3890	510	18.5
29...	1300	1490	1200	0.0	JUL				
FEB					05...	0835	3760	775	19.5
28...	1300	1360	1350	6.0	20...	0900	2860	836	21.0
MAR					25...	0835	2680	917	19.0
07...	1200	1360	1240	5.0	AUG				
14...	0930	1250	1400	3.0	02...	1150	2030	920	20.0
28...	0900	1340	1190	11.0	16...	1000	2070	913	19.0
APR					22...	1400	2150	915	19.5
04...	1300	1540	1210	13.5	30...	1100	1970	931	19.5
11...	1200	2090	920	11.0	SEP				
25...	1000	2190	830	12.0	14...	1000	1930	987	18.0
MAY					20...	1300	2080	975	14.5
02...	1100	1660	1020	11.0	28...	1000	1620	1080	16.5

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	1180	---	1220	1300	1320	1110	962	529	665	---	892
2	1060	1190	---	1270	---	1310	1120	1020	528	638	---	884
3	1080	1180	---	1300	---	1320	1120	1050	576	627	---	875
4	1060	1200	---	1290	---	1320	1080	1060	619	642	---	860
5	---	1200	---	1300	---	1290	1040	1070	528	691	---	863
6	---	1190	---	1350	---	1300	990	1060	374	658	---	894
7	1000	1230	1300	1420	---	1260	985	1030	339	631	---	902
8	996	1200	1240	1400	---	1270	952	949	329	643	---	904
9	988	1170	1240	1370	---	1290	922	855	324	664	---	925
10	985	1130	1300	1290	---	1310	922	827	327	656	---	897
11	975	1130	1300	1270	---	1340	901	808	325	660	---	885
12	1000	1150	1290	1260	---	1330	952	853	323	699	---	896
13	954	1130	1260	1160	---	1310	951	839	340	689	---	888
14	975	1140	1380	1210	---	1320	991	851	311	679	---	891
15	994	1160	1390	1240	---	1340	1020	890	291	700	---	909
16	990	1210	1290	1230	---	1310	1020	880	291	738	---	925
17	982	1230	---	---	---	1340	998	832	308	776	877	1020
18	958	1250	---	---	---	1390	913	830	328	809	876	1040
19	963	1240	---	---	---	1400	833	853	328	862	906	1000
20	980	1230	---	---	---	1380	814	894	377	860	940	984
21	1010	1220	---	---	---	1360	842	875	456	851	948	962
22	1030	1200	---	---	1340	1330	862	839	474	828	999	973
23	1060	1230	---	---	1340	1300	866	726	494	---	1010	1000
24	1070	1220	---	---	1330	1270	854	557	504	---	924	1030
25	1070	1210	---	---	1320	1230	825	432	512	---	893	1080
26	1080	1220	---	---	1310	1210	791	436	519	---	879	1080
27	1090	1200	---	---	1290	1210	791	439	530	---	886	1100
28	1100	1170	1250	---	1290	1220	807	457	532	---	890	1130
29	1110	1190	1280	---	---	1180	848	457	569	---	901	1140
30	1120	1230	1290	---	---	1130	910	441	623	---	911	1140
31	1130	---	1280	1360	---	1110	---	499	---	---	893	---
MEAN	---	1190	---	---	---	1290	934	793	430	---	---	966

COLORADO RIVER MAIN STEM

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	17.1	13.6	6.0	3.5	---	---	.0	.0	2.4	.4	7.2	4.7
2	15.7	12.7	5.5	2.8	---	---	.0	.0	---	---	7.9	4.8
3	14.9	12.2	5.5	2.9	---	---	.0	.0	---	---	7.0	5.6
4	15.1	12.8	5.4	3.1	---	---	.0	.0	---	---	8.0	5.5
5	---	---	6.3	3.1	---	---	.0	.0	---	---	7.1	5.8
6	---	---	7.8	5.9	---	---	.0	.0	---	---	6.6	5.0
7	14.3	10.8	7.9	6.4	3.3	1.7	.0	.0	---	---	6.6	4.2
8	14.2	10.8	6.5	4.7	2.4	.5	.0	.0	---	---	8.3	4.6
9	14.2	10.7	7.1	4.5	1.5	.0	.0	.0	---	---	8.6	5.7
10	14.4	10.7	7.6	5.0	1.4	.0	.0	.0	---	---	9.0	7.1
11	14.1	10.6	7.9	5.3	.5	.0	.0	.0	---	---	9.9	7.6
12	13.9	10.5	7.9	5.3	.0	.0	.0	.0	---	---	7.6	5.5
13	13.6	11.0	7.7	5.4	.0	.0	1.0	.0	---	---	6.0	4.4
14	13.8	10.8	7.1	4.9	.2	.0	2.7	.9	---	---	5.6	2.7
15	13.6	11.7	5.2	3.2	.2	.0	2.6	2.0	---	---	6.1	2.6
16	13.3	11.5	3.9	2.1	.0	.0	2.7	1.5	---	---	7.4	3.5
17	12.3	9.8	3.8	2.2	---	---	---	---	---	---	7.3	4.6
18	11.8	9.0	4.0	2.1	---	---	---	---	---	---	8.8	5.8
19	11.9	8.1	4.0	1.9	---	---	---	---	---	---	10.1	6.1
20	10.2	7.1	4.4	2.0	---	---	---	---	---	---	10.3	7.7
21	10.8	8.1	5.0	2.6	---	---	---	---	---	---	12.3	8.9
22	11.8	9.8	4.7	2.5	---	---	---	---	5.1	2.0	12.8	8.8
23	12.3	9.8	4.7	2.5	---	---	---	---	5.3	2.0	13.0	10.4
24	12.5	9.7	4.2	3.1	---	---	---	---	6.1	3.0	12.6	9.2
25	11.1	9.5	5.0	3.6	---	---	---	---	6.3	3.8	12.3	8.5
26	9.6	8.2	5.1	4.4	---	---	---	---	7.3	3.9	13.0	8.8
27	9.5	6.8	4.7	3.5	---	---	.1	.0	7.9	5.4	12.4	10.4
28	8.8	7.0	3.5	1.8	.0	.0	.0	.0	7.7	4.7	12.1	10.3
29	7.4	5.7	1.6	.0	.1	.0	.5	.0	---	---	10.9	9.2
30	6.4	4.1	1.4	.0	.2	.0	.3	.0	---	---	11.0	8.5
31	6.2	3.5	---	---	.0	.0	1.3	.1	---	---	12.2	8.0
MONTH	---	---	7.9	.0	---	---	---	---	---	---	13.0	2.6
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	13.4	9.0	11.2	7.5	13.6	11.3	23.0	17.8	20.4	17.9	20.2	17.9
2	14.7	10.5	12.9	9.0	12.9	9.5	23.0	20.3	20.9	17.2	22.2	18.2
3	14.3	11.2	14.6	10.1	14.9	10.8	21.5	18.7	21.7	17.0	22.3	18.3
4	14.7	11.9	14.7	11.4	16.7	13.5	22.4	18.7	22.0	17.7	23.4	19.5
5	13.2	10.6	16.5	11.2	16.8	14.3	20.8	18.7	22.3	17.0	22.9	19.5
6	14.4	10.0	17.9	12.6	16.0	13.7	21.3	18.7	22.0	19.1	21.9	18.2
7	13.9	10.3	16.3	13.5	15.7	12.7	20.6	18.1	23.0	19.0	21.8	18.2
8	13.6	11.5	16.0	12.5	15.7	11.4	20.7	18.8	23.4	19.2	22.0	18.0
9	12.0	9.9	14.2	10.5	15.3	12.9	21.1	18.7	23.3	18.5	21.2	17.7
10	12.9	8.7	14.9	10.5	15.1	11.8	21.3	18.7	23.4	18.8	20.5	17.0
11	14.3	9.9	14.3	11.7	14.6	11.3	---	---	23.0	19.2	20.7	16.6
12	14.7	11.1	14.0	11.1	14.8	11.1	---	---	22.5	19.6	19.8	16.5
13	14.6	11.2	14.6	11.5	15.3	11.7	---	---	21.7	18.6	20.0	16.0
14	15.0	11.1	14.9	11.8	16.3	13.1	---	---	21.5	18.5	20.4	17.3
15	15.8	11.8	15.1	11.4	15.6	13.0	---	---	21.5	19.0	21.0	16.8
16	15.7	11.8	15.3	11.4	14.9	10.8	---	---	21.5	18.2	19.7	16.7
17	14.5	12.9	15.9	11.8	16.4	11.2	---	---	21.2	18.6	19.0	16.0
18	14.6	11.4	15.2	12.4	17.2	13.4	---	---	21.6	18.3	17.8	15.8
19	15.8	12.1	15.6	11.8	17.4	13.3	---	---	21.2	18.2	16.9	14.4
20	15.8	11.8	17.0	12.6	19.7	13.6	---	---	19.4	17.1	15.6	14.1
21	15.5	11.9	18.1	12.8	18.3	13.4	---	---	21.4	17.0	16.8	13.4
22	14.4	12.3	18.4	14.1	18.6	16.0	22.9	19.6	19.8	17.8	18.2	13.9
23	15.4	12.7	17.5	14.6	19.0	16.4	21.2	19.0	19.6	15.6	17.6	13.0
24	14.6	12.1	16.2	14.7	19.6	16.5	21.1	18.6	20.6	15.9	18.4	14.0
25	13.1	11.7	15.3	12.9	20.2	17.5	21.3	18.6	20.2	16.3	18.7	15.4
26	13.8	10.7	14.0	12.3	20.6	17.9	22.6	18.7	20.4	14.7	19.1	15.6
27	12.7	10.0	14.9	11.6	20.7	18.2	22.8	19.0	21.2	16.1	17.9	15.0
28	12.6	9.5	14.3	12.9	20.5	17.5	22.6	18.6	21.9	16.9	17.3	15.2
29	11.9	8.5	14.2	12.3	20.8	17.6	21.9	18.3	22.4	16.8	17.0	14.3
30	10.1	7.9	13.5	11.2	21.1	18.0	21.5	17.3	22.3	18.0	17.3	14.0
31	---	---	14.1	11.3	---	---	22.6	18.5	20.9	18.3	---	---
MONTH	15.8	7.9	18.4	7.5	21.1	9.5	---	---	23.4	14.7	23.4	13.0

09095500 COLORADO RIVER NEAR CAMEO, CO--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
04...	1400	1780	58	279	90
11...	1200	1990	36	193	84
19...	1100	2010	39	212	88
25...	1200	1820	26	128	80
NOV					
01...	1300	1660	23	103	67
07...	1300	1630	15	66	67
15...	1300	1540	10	42	74
22...	1200	1520	13	53	67
29...	1300	1490	25	101	89
DEC					
06...	1200	1420	22	84	72
FEB					
21...	1400	1290	51	178	94
28...	1300	1360	22	81	79
MAR					
07...	1200	1360	113	415	94
14...	0930	1250	36	122	89
21...	1200	1230	20	66	75
28...	0900	1340	29	105	81
APR					
04...	1300	1540	19	79	78
11...	1200	2090	182	1030	81
18...	1400	2260	113	690	77
25...	1000	2190	131	775	82
MAY					
02...	1100	1660	36	161	87
09...	1100	2550	126	868	74
16...	0900	2530	520	3550	97
23...	1000	3470	278	2600	65
30...	1300	6080	321	5270	59
JUN					
06...	1200	8090	559	12200	60
13...	1100	9240	198	4940	50
20...	1000	5460	63	929	52
29...	1000	3890	20	210	66
JUL					
05...	0835	3760	267	2710	93
11...	1000	3540	133	1270	85
20...	0900	2860	49	378	86
25...	0835	2680	3070	22200	99
AUG					
02...	1150	2030	49	269	77
10...	1100	2010	33	179	85
16...	1000	2070	307	1720	93
22...	1400	2150	273	1580	92
30...	1100	1970	67	356	86
SEP					
05...	1130	2190	78	461	92
14...	1000	1930	60	313	90
20...	1300	2080	68	382	95
28...	1000	1620	12	52	85

09105000 PLATEAU CREEK NEAR CAMEO, CO

LOCATION.--Lat 39°11'00", long 108°16'02", in SW¼SW¼ sec.18, T.10 S., R.97 W., Mesa County, Hydrologic Unit 14010005, on left bank 300 ft from State Highway 65, 1.15 mi upstream from mouth and 4 mi northeast of Cameo.

DRAINAGE AREA.--592 mi².

PERIOD OF RECORD.--October 1935 to September 1983. October 1985 to current year. Prior to May 1936, monthly discharges only, published in WSP 1313.

REVISED RECORDS.--WSP 979: 1942. WSP 2124: Drainage area. WDR CO-83-2: 1973 (M), 1975 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,840 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 27, 1936, nonrecording gage.

REMARKS.--Estimated daily discharges: Nov. 17 to Feb. 2, and Feb. 16-18. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 25,000 acres, return flow from irrigated areas, and for power development. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--53 years (water years 1935-83, 1986-90) 186 ft³/s; 134,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,010 ft³/s, June 22, 1983, gage height, 8.51 ft; maximum gage height, 8.59 ft, May 28, 1983; minimum daily discharge, 8.2 ft³/s, Aug. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 297 ft³/s at 0430 May 25, gage height, 2.66 ft, maximum gage height 3.96 ft at 2015 Dec. 1 (backwater from ice); minimum daily discharge, 17 ft³/s, Aug. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	80	44	51	64	60	59	65	79	18	21	40
2	61	80	50	53	60	58	55	63	84	26	20	41
3	61	75	51	55	56	59	57	62	70	18	20	56
4	55	75	52	52	56	61	63	61	86	19	18	48
5	59	76	58	50	61	61	63	60	125	21	17	48
6	62	76	59	54	55	62	60	57	126	22	20	49
7	63	79	46	56	57	58	54	71	97	28	21	60
8	65	72	44	58	57	55	57	92	77	30	21	54
9	65	68	45	59	54	57	92	86	67	33	19	52
10	66	69	46	58	57	58	91	70	63	30	20	47
11	67	69	42	57	56	59	71	72	69	25	20	43
12	67	69	41	56	56	59	69	74	70	24	22	43
13	66	70	46	58	62	55	70	62	64	21	24	40
14	66	69	54	59	63	48	75	61	53	23	24	37
15	66	67	58	60	57	52	74	85	47	23	26	35
16	72	62	54	61	50	49	85	95	44	22	34	33
17	84	61	50	60	49	49	85	71	39	21	61	45
18	94	58	47	58	51	50	87	71	36	20	37	48
19	104	59	52	56	54	47	78	77	32	21	33	50
20	107	61	50	60	55	53	77	77	30	22	32	53
21	107	60	49	58	55	58	70	76	26	24	35	53
22	97	62	48	56	55	58	73	93	25	25	34	49
23	102	59	47	58	55	59	89	113	23	23	36	45
24	106	61	46	60	57	58	93	177	21	20	38	43
25	107	59	45	58	59	57	88	204	20	27	35	45
26	103	62	48	61	59	60	77	139	19	30	34	47
27	100	55	50	60	61	63	65	102	20	23	33	47
28	85	45	51	56	61	61	58	116	21	22	34	48
29	85	38	52	58	---	62	57	112	18	22	36	51
30	84	40	51	60	---	97	66	91	18	21	35	53
31	81	---	50	62	---	70	---	76	---	21	35	---
TOTAL	2463	1936	1526	1778	1593	1813	2158	2731	1569	725	895	1403
MEAN	79.5	64.5	49.2	57.4	56.9	58.5	71.9	88.1	52.3	23.4	28.9	46.8
MAX	107	80	59	62	64	97	93	204	126	33	61	60
MIN	55	38	41	50	49	47	54	57	18	18	17	33
AC-FT	4890	3840	3030	3530	3160	3600	4280	5420	3110	1440	1780	2780

CAL YR 1989 TOTAL 32702 MEAN 89.6 MAX 290 MIN 34 AC-FT 64860
WTR YR 1990 TOTAL 20590 MEAN 56.4 MAX 204 MIN 17 AC-FT 40840

09107000 TAYLOR RIVER AT TAYLOR PARK, CO

LOCATION.--Lat 38°51'37", long 108°33'58", in NW¼NE¼ sec.5, T.14 S., R.82 W., Gunnison County, Hydrologic Unit 14020001, on left bank 0.2 ft upstream from Taylor Park Reservoir waterline, 2.7 mi north of Taylor Park, and 21 mi northeast of Almont.

DRAINAGE AREA.--128 mi²

PERIOD OF RECORD.--June 1929 to Sept. 1934, Oct. 1987 to current year. Records for 1929-1934 provided by Colorado Division of Water Resources, published in WSP 1313.

REVISED RECORDS.--WSP 1313: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,340 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1929 to Sept. 1934 water-stage recorder at different datum at site flooded by waters of Taylor Park Reservoir since 1937.

REMARKS.--Estimated daily discharges: Nov. 8 to March 19. Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--8 years (water years 1930-34, 1988-90), 89.8 ft³/s; 65,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s, May 31, 1933, gage height, 2.80 ft, from rating curve extended above 480 ft³/s, site and datum then in use; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 320 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	0700	395	2.71	June 6	0300	*658	*3.23

Minimum daily discharge, 25 ft³/s, Feb. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	43	33	32	26	31	43	68	278	165	64	40
2	47	34	34	32	26	33	46	77	221	157	72	39
3	48	45	34	29	26	34	54	86	247	156	71	38
4	60	46	36	30	27	34	58	83	371	177	62	38
5	63	45	38	29	27	35	56	77	486	167	63	38
6	55	44	36	29	27	35	56	89	531	182	56	45
7	52	42	34	29	27	36	57	116	532	166	53	47
8	51	40	33	28	28	35	58	127	547	148	51	43
9	49	39	35	29	28	37	58	103	540	165	52	43
10	49	39	35	30	28	37	55	110	556	140	51	41
11	48	39	33	30	29	37	60	126	575	127	50	41
12	47	39	30	29	30	34	60	102	570	113	54	39
13	46	37	31	28	29	32	60	107	427	106	88	37
14	46	36	33	27	28	32	61	121	423	102	67	37
15	47	36	35	28	26	34	74	121	392	101	61	36
16	54	36	37	28	25	35	88	115	310	99	60	36
17	51	38	36	28	26	36	84	104	302	99	62	53
18	52	33	34	27	28	37	78	126	303	92	65	54
19	47	36	34	28	28	38	80	121	312	99	59	74
20	42	35	35	27	29	42	84	137	288	87	53	59
21	44	35	36	27	30	43	95	166	274	83	52	55
22	44	35	36	27	29	46	96	209	260	82	50	50
23	41	37	35	28	29	48	95	232	248	75	51	47
24	46	36	34	28	30	46	96	293	237	88	50	46
25	46	35	35	28	31	48	81	265	223	116	48	45
26	47	38	37	29	31	50	84	290	214	96	44	42
27	41	35	36	30	31	50	73	274	203	80	43	42
28	43	33	36	30	32	46	76	305	197	74	42	60
29	37	31	33	30	---	41	97	334	181	71	41	70
30	37	31	30	28	---	39	73	254	171	71	40	60
31	40	---	32	26	---	40	---	285	---	64	40	---
TOTAL	1467	1133	1066	888	791	1201	2136	5023	10419	3548	1715	1395
MEAN	47.3	37.8	34.4	28.6	28.2	38.7	71.2	162	347	114	55.3	46.5
MAX	63	46	38	32	32	50	97	334	575	182	88	74
MIN	37	31	30	26	25	31	43	68	171	64	40	36
AC-FT	2910	2250	2110	1760	1570	2380	4240	9960	20670	7040	3400	2770

CAL YR 1989 TOTAL 34447 MEAN 94.4 MAX 452 MIN 24 AC-FT 68330
WTR YR 1990 TOTAL 30782 MEAN 84.3 MAX 575 MIN 25 AC-FT 61060

09107500 TEXAS CREEK AT TAYLOR PARK, CO

LOCATION.--Lat 38°50'51", long 106°33'13", in SE¼NW¼ sec.9, T.14 S., R.82 W., Gunnison County, Hydrologic Unit 14020001, on right bank 150 ft upstream from bridge on county road 742, 1.8 mi north of Taylor Park, and 20 mi northeast of Almont.

DRAINAGE AREA.--40.4 mi².

PERIOD OF RECORD.--June 1929 to September 1934, September 1987 to current year. Records for 1929-34 provided by Colorado Division of Water Resources, published in WSP 1313.

REVISED RECORDS.--WSP 1313: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,380 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1929 to Sept. 1934, water-stage recorder at different datum. Site flooded by Taylor Park Reservoir since 1937.

REMARKS.--Estimated daily discharges: Oct. 27 to Dec. 9. Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--8 years (water years 1930-34, 1988-90), 36.4 ft³/s; 26,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 524 ft³/s, June 9, 1990, gage height, 3.82 ft; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 524 ft³/s at 0400 June 9, gage height, 3.82 ft; minimum daily, 4.9 ft³/s, Mar. 17.

REVISIONS.--The maximum discharges for the water years 1988 and 1989 have been revised to 278 ft³/s, June 7, 1988, gage height, 3.53 ft, and 290 ft³/s, Aug. 1, 1989, gage height, 3.55 ft, from rating curve extended on basis of discharge measurements, these figures supersede those published in the reports for 1988 and 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	16	8.7	6.5	6.2	5.3	8.2	17	101	63	26	19
2	15	13	8.9	6.5	6.2	5.1	8.1	17	81	68	26	18
3	15	15	8.9	6.7	6.2	5.6	9.5	16	100	65	26	18
4	17	15	9.2	6.8	6.1	5.9	12	18	209	61	24	17
5	18	13	9.2	6.8	5.9	5.9	13	18	297	68	23	17
6	18	11	8.9	6.3	5.9	5.9	11	21	315	83	21	19
7	17	11	8.5	6.1	5.9	6.0	12	26	290	72	19	22
8	16	11	8.1	6.0	5.9	6.2	13	27	347	63	19	21
9	16	11	7.8	5.9	5.9	6.1	12	24	375	91	18	20
10	15	11	8.0	5.9	6.2	6.4	11	24	313	70	18	19
11	15	11	8.0	6.0	6.2	6.4	13	27	380	56	18	18
12	14	10	8.0	6.2	6.2	6.3	12	24	360	48	19	16
13	14	10	7.7	5.9	6.2	6.5	12	23	256	45	33	16
14	13	10	7.4	5.9	6.2	5.3	12	23	233	44	35	15
15	12	10	7.4	6.0	6.0	5.9	16	25	202	42	33	15
16	13	10	7.4	6.3	5.9	5.6	18	25	143	41	37	15
17	13	11	7.3	6.5	5.9	4.9	17	21	137	39	35	18
18	12	11	7.1	6.5	5.9	5.8	17	23	142	36	34	24
19	13	10	7.3	6.5	5.9	5.4	19	23	173	52	30	26
20	13	9.6	7.4	6.5	5.9	5.2	20	24	157	41	27	25
21	14	9.3	7.5	6.5	5.9	6.2	22	34	118	37	26	25
22	15	9.3	7.7	6.5	5.9	6.2	23	49	97	34	31	22
23	14	9.7	7.4	6.5	5.9	7.3	24	60	97	30	32	21
24	14	9.6	7.4	6.7	5.9	7.2	23	96	93	47	28	21
25	14	9.3	7.4	6.8	5.8	7.8	20	93	85	61	24	21
26	14	10	7.1	6.8	5.3	8.4	19	100	83	54	22	20
27	14	9.7	6.5	6.5	5.3	8.1	16	95	81	42	21	19
28	14	9.0	6.5	6.7	5.3	8.2	16	104	78	35	20	25
29	13	8.4	6.5	6.8	---	7.5	18	137	74	32	20	37
30	14	8.4	6.5	6.2	---	7.4	17	104	65	31	19	34
31	17	---	6.5	6.2	---	7.1	---	98	---	28	18	---
TOTAL	451	322.3	238.2	198.0	166.0	197.1	463.8	1416	5482	1579	782	623
MEAN	14.5	10.7	7.68	6.39	5.93	6.36	15.5	45.7	183	50.9	25.2	20.8
MAX	18	16	9.2	6.8	6.2	8.4	24	137	380	91	37	37
MIN	12	8.4	6.5	5.9	5.3	4.9	8.1	16	65	28	18	15
AC-FT	895	639	472	393	329	391	920	2810	10870	3130	1550	1240

CAL YR 1989 TOTAL 12906.7 MEAN 35.4 MAX 178 MIN 4.0 AC-FT 25600
WTR YR 1990 TOTAL 11918.4 MEAN 32.7 MAX 380 MIN 4.9 AC-FT 23640

09108500 TAYLOR PARK RESERVOIR AT TAYLOR PARK, CO

LOCATION.--Lat 38°49'07", long 106°36'24", Gunnison County, Hydrologic Unit 14020001, at dam on Taylor River just downstream from Taylor Park, 16 mi northeast of Almont.

DRAINAGE AREA.--254 mi².

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1938, published in WSP 1313.

REVISED RECORDS.-- WSP 1089: 1940(M), 1942(M), 1945-46. WSP 1924: Drainage area.

GAGE.--Nonrecording gage read once daily with satellite telemetry. Datum of gage is 9,187 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth and rockfill dam. Dam completed by U. S. Bureau of Reclamation in September 1937. Capacity of reservoir, 106,200 acre-ft between elevations 9,187 ft, bottom of outlet gates, and 9,330 ft, crest of spillway. No dead storage. Water used for irrigation in Uncompahgre Valley. Figures given are usable contents.

COOPERATION.--Records provided by Uncompahgre Valley Water Users Association.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 111,000 acre-ft, July 1, 1957, elevation, 9,332.35 ft; minimum after first filling, 8,780 acre-ft, Oct. 19-20, 1956, elevation, 9,240.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 100,600 acre-ft, June 29, elevation, 9,327.30 ft; minimum contents, 65,600 acre-ft, Apr. 3-13, elevation, 9,307.40 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 1800, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	9,319.00	84,900	-
Oct. 31.	9,315.40	78,600	-6,300
Nov. 30.	9,314.25	76,600	-2,000
Dec. 31.	9,312.40	73,500	-3,100
CAL YR 1989	-	-	+2,700
Jan. 31.	9,310.90	71,100	-2,400
Feb. 28.	9,309.40	68,700	-2,400
Mar. 31.	9,307.50	65,800	-2,900
Apr. 30.	9,308.60	67,500	+1,700
May 31.	9,314.60	77,200	+9,700
June 30.	9,327.25	100,500	+23,300
July 31.	9,325.40	96,900	-3,600
Aug. 31.	9,320.50	87,700	-9,200
Sept. 30.	9,316.30	80,200	-7,500
WTR YR 1990	-	-	-4,700

09109000 TAYLOR RIVER BELOW TAYLOR PARK RESERVOIR, CO

LOCATION.--Lat 38°49'06", long 106°36'31", Gunnison County, Hydrologic Unit 14020001, on left bank 1,000 ft downstream from Taylor Park Reservoir Dam, 3.4 mi upstream from Lottis Creek, and 17 mi northeast of Almont.

DRAINAGE AREA.--254 mi².

PERIOD OF RECORD.--June 1929 to September 1934 (monthly discharges only, published in WSP 1313), October 1938 to current year.

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 9,169.67 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Nov. 11, 1952, at site 1,600 ft downstream, at datum 1.00 ft. lower. Oct. 15, 1946, to May 4, 1952, supplementary nonrecording gage just downstream from reservoir outlet at different sites and datums used during winter months.

REMARKS.--Estimated daily discharges: Dec. 19 to Apr. 5. Records good. Flow regulated by Taylor Park Reservoir (station 09108500) since 1937. One small diversion for irrigation from Willow Creek upstream from reservoir. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--5 years (water years 1930-34), 156 ft³/s; 113,000 acre-ft/yr; 52 years (water years 1939-90), 195 ft³/s; 141,300 acre-ft/yr. The figure in the 1988 report was in error; the correct figure is 50 years (water years 1939-88), 197 ft³/s; 142,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,270 ft³/s, July 1, 1957, gage height, 7.56 ft; no flow May 1 to July 3, 1940, May 7-22, 1942, May 5-21, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 340 ft³/s at 1130 June 18, gage height, 4.20 ft; minimum daily, 90 ft³/s, Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	100	99	100	100	100	100	95	176	338	247	232
2	252	99	99	100	100	100	100	97	190	337	247	232
3	252	99	99	100	100	100	100	97	190	337	247	232
4	249	99	99	100	100	100	100	97	190	337	247	205
5	247	99	99	100	100	100	100	97	191	337	247	189
6	247	99	99	100	100	100	95	97	191	320	247	190
7	247	99	99	100	100	100	96	97	190	255	246	193
8	247	99	99	100	100	100	96	97	190	242	246	195
9	247	99	99	100	100	100	96	97	189	245	246	195
10	247	99	99	100	100	100	96	97	188	245	245	195
11	247	99	99	100	100	100	96	99	191	242	245	195
12	247	99	99	100	100	100	97	99	193	244	246	194
13	247	99	99	100	100	100	97	99	195	243	247	192
14	247	99	99	100	100	100	96	99	193	243	244	192
15	247	98	99	100	100	100	96	98	236	242	242	192
16	198	97	99	100	100	100	95	97	283	244	240	192
17	118	97	99	100	100	100	96	97	282	245	240	196
18	100	97	99	100	100	100	96	97	317	245	239	197
19	90	97	100	100	100	100	96	97	339	245	237	197
20	99	98	100	100	100	100	96	97	340	245	236	197
21	99	99	100	100	100	100	97	97	340	245	236	195
22	99	99	100	100	100	100	97	97	340	245	237	195
23	99	99	100	100	100	100	97	97	340	245	236	197
24	100	99	100	100	100	100	96	97	340	245	237	200
25	101	99	100	100	100	100	96	98	340	245	235	200
26	102	99	100	100	100	100	96	99	340	245	235	200
27	101	99	100	100	100	100	96	99	340	245	232	200
28	100	99	100	100	100	100	96	99	340	245	232	200
29	100	99	100	100	---	100	96	99	340	245	232	199
30	100	99	100	100	---	100	94	99	340	245	232	197
31	100	---	100	100	---	100	---	128	---	246	232	---
TOTAL	5428	2961	3082	3100	2800	3100	2901	3056	7854	8127	7457	5985
MEAN	175	98.7	99.4	100	100	100	96.7	98.6	262	262	241	199
MAX	252	100	100	100	100	100	100	128	340	338	247	232
MIN	90	97	99	100	100	100	94	95	176	242	232	189
AC-FT	10770	5870	6110	6150	5550	6150	5750	6060	15580	16120	14790	11870

CAL YR 1989 TOTAL 57511 MEAN 158 MAX 256 MIN 90 AC-FT 114100
WTR YR 1990 TOTAL 55851 MEAN 153 MAX 340 MIN 90 AC-FT 110800

09110000 TAYLOR RIVER AT ALMONT, CO

LOCATION.--Lat 38°39'52", long 106°50'41", in NW¼SE¼ sec.22, T.51 N., R.1 E., Gunnison County, Hydrologic Unit 14020001, on left bank at Almont, 15 ft downstream from bridge on State Highway 306, and 800 ft upstream from confluence with East River.

DRAINAGE AREA.--477 mi².

PERIOD OF RECORD.--July 1910 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1911. WSP 1924: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,010.76 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 16, 1922, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Nov. 22 to Apr. 5. Records good except for estimated daily discharges, which are poor. Flow partly regulated since September 1937 by Taylor Park Reservoir (station 09108500), 24 mi upstream from station. Diversions for irrigation of about 360 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--80 years, 336 ft³/s; 243,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 3,760 ft³/s, June 9, 1920, gage height, 5.00 ft, from rating curve extended above 2,300 ft³/s; maximum gage height, 5.32 ft, July 1, 1957; minimum discharge observed before storage began in Taylor Park Reservoir, 50 ft³/s for several days in August 1913, gage height, 1.2 ft; minimum daily discharge, subsequent to completion of Taylor Park Dam, 24 ft³/s, Mar. 12, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 555 ft³/s at 0130 June 11, gage height, 2.66 ft; minimum daily, 104 ft³/s, Feb. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	296	164	128	120	150	128	142	170	345	434	327	288
2	296	164	128	125	142	128	148	169	348	436	330	284
3	296	163	130	120	135	128	148	174	354	430	331	284
4	301	163	130	118	130	128	150	182	405	432	328	273
5	296	161	132	112	130	125	150	187	478	439	329	252
6	292	160	130	108	128	125	154	191	502	481	327	257
7	288	158	128	112	125	120	153	193	499	392	324	256
8	288	159	122	118	123	118	156	193	499	359	323	256
9	287	157	120	120	120	118	156	188	499	394	319	255
10	285	156	120	120	122	120	153	187	515	363	319	252
11	283	157	118	122	122	120	157	192	511	346	317	252
12	282	156	120	120	125	120	159	186	494	335	317	249
13	284	156	126	122	125	118	160	184	448	330	326	249
14	281	155	126	125	122	118	160	186	411	330	337	248
15	282	156	120	123	120	118	170	192	412	329	334	246
16	275	159	116	120	112	120	176	191	463	347	327	246
17	199	162	113	118	104	125	175	188	448	342	327	269
18	168	160	116	110	106	125	175	192	458	335	323	269
19	158	160	118	110	112	122	181	190	482	333	318	283
20	163	160	120	116	118	125	181	191	477	330	315	266
21	166	160	120	120	118	128	194	198	473	327	314	263
22	163	145	122	125	118	136	189	222	464	323	311	261
23	163	138	122	125	120	148	188	230	458	319	313	259
24	162	130	122	125	122	150	188	263	454	345	310	260
25	159	130	118	128	126	150	178	269	451	361	302	262
26	157	130	110	130	130	145	177	274	445	346	292	266
27	156	122	115	130	130	150	171	264	442	335	292	266
28	160	118	121	130	128	150	173	274	444	331	291	294
29	166	118	126	135	---	145	184	306	437	326	288	309
30	165	122	126	147	---	142	173	279	438	323	288	287
31	167	---	122	150	---	142	---	293	---	324	288	---
TOTAL	7084	4499	3785	3804	3463	4035	5019	6598	13554	11177	9787	7961
MEAN	229	150	122	123	124	130	167	213	452	361	316	265
MAX	301	164	132	150	150	150	194	306	515	481	337	309
MIN	156	118	110	108	104	118	142	169	345	319	288	246
AC-FT	14050	8920	7510	7550	6870	8000	9960	13090	26880	22170	19410	15790

CAL YR 1989 TOTAL 87320 MEAN 239 MAX 472 MIN 80 AC-FT 173200
WTR YR 1990 TOTAL 80766 MEAN 221 MAX 515 MIN 104 AC-FT 160200

09112500 EAST RIVER AT ALMONT, CO

LOCATION.--Lat 38°39'52", long 106°50'51", in NW¼SE¼ sec.22, T.51 N., R.1 E., Gunnison County, Hydrologic Unit 14020001, on left bank at Almont, 200 ft upstream from bridge on State Highway 135, and 400 ft upstream from confluence with Taylor River.

DRAINAGE AREA.--289 mi².

PERIOD OF RECORD.--April to October 1905, July 1910 to September 1922, October 1934 to current year. Monthly discharges only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1911. WSP 1733: 1952. WSP 1924: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,006.29 ft above National Geodetic Vertical Datum of 1929. Apr. 16 to Sept. 30, 1905, and July 27, 1910, to Apr. 30, 1922, nonrecording gages at bridge 200 ft downstream, at different datums. Oct. 1, 1934, to Sept. 22, 1954, water-stage recorder at present site at datum 2.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 29 to March 14, June 15-20, July 16-18. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 7,400 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--68 years (water years 1911-22, 1935-90), 337 ft³/s; 244,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 6,500 ft³/s, June 15, 1921, gage height, 6.6 ft, site and datum then in use, from rating curve extended above 3,000 ft³/s; minimum daily, 19 ft³/s, Aug. 13, 1913.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	0330	*1,730	*5.48	No other peak greater than base discharge.			

Minimum daily, 40 ft³/s, Feb. 15, 196.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	75	60	52	44	51	81	158	679	378	137	96
2	83	70	62	54	42	52	82	163	558	372	137	93
3	83	70	62	54	41	51	94	176	513	353	138	92
4	88	74	62	50	44	52	104	174	767	339	137	86
5	91	78	63	47	47	50	110	172	1170	356	132	84
6	95	75	61	47	46	48	108	178	1370	418	152	95
7	96	72	58	48	49	48	116	232	1380	368	166	96
8	92	68	56	47	45	48	136	245	1380	377	152	105
9	92	73	56	49	45	50	144	221	1460	539	141	95
10	93	72	58	50	48	52	119	205	1400	430	137	93
11	95	71	56	49	45	53	130	234	1500	367	135	96
12	97	69	54	49	45	50	136	213	1420	316	138	95
13	94	68	57	48	45	46	131	188	1130	291	141	90
14	92	66	60	48	42	48	121	183	1130	275	134	84
15	89	60	60	48	40	56	143	190	1050	248	144	79
16	92	58	56	48	40	55	157	201	930	223	138	77
17	91	66	52	46	44	53	167	190	850	205	132	101
18	74	67	55	44	47	57	158	196	920	200	127	104
19	72	68	55	48	49	51	148	207	860	195	122	85
20	74	70	54	47	50	55	158	250	800	188	116	76
21	76	71	54	45	50	60	181	299	713	185	115	73
22	72	66	54	45	47	62	196	347	687	176	111	73
23	72	61	52	48	49	71	201	419	660	169	104	74
24	72	63	50	50	53	73	205	672	640	188	111	74
25	70	71	48	47	53	75	190	649	616	241	106	74
26	73	65	50	50	51	79	186	706	594	214	101	72
27	72	59	53	47	53	84	166	660	588	188	96	70
28	72	56	58	43	51	83	167	740	521	172	93	89
29	74	51	57	46	---	83	170	838	480	160	91	87
30	70	56	52	46	---	80	162	647	410	149	92	83
31	73	---	50	46	---	78	---	612	---	146	97	---
TOTAL	2563	2009	1735	1486	1305	1854	4367	10565	27176	8426	3873	2591
MEAN	82.7	67.0	56.0	47.9	46.6	59.8	146	341	906	272	125	86.4
MAX	97	78	63	54	53	84	205	838	1500	539	166	105
MIN	70	51	48	43	40	46	81	158	410	146	91	70
AC-FT	5080	3980	3440	2950	2590	3680	8660	20960	53900	16710	7680	5140

CAL YR 1989 TOTAL 94756 MEAN 260 MAX 1290 MIN 40 AC-FT 187900
WTR YR 1990 TOTAL 67950 MEAN 186 MAX 1500 MIN 40 AC-FT 134800

09114500 GUNNISON RIVER NEAR GUNNISON, CO

LOCATION.--Lat 38°32'31", long 106°56'57", in NW¼NW¼ sec.2, T.49 N., R.1 W., Gunnison County, Hydrologic Unit 14020002, on right bank 0.7 mi downstream from Antelope Creek and 1.2 mi west of Gunnison.

DRAINAGE AREA.--1,012 mi².

PERIOD OF RECORD.--October 1910 to December 1928, October 1944 to current year. Monthly discharges only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1911, 1916.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,655 ft above National Geodetic Vertical Datum of 1929, from topographic map. Nov. 25, 1910 to Dec. 31, 1928, nonrecording gages (supplementary water-stage recorder Apr. 28, 1916 to June 17, 1918) at bridge about 0.6 mi downstream at various datums. Oct. 1, 1944 to July 28, 1970, water-stage recorder at sites 0.4 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 29 to Mar. 14. Records good except for estimated daily discharges, which are poor. Flow regulated by Taylor Park Reservoir (station 09108500), 37 mi upstream from station. Diversions for irrigation of about 22,000 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--64 years (water years 1911-28, 1945-90), 762 ft³/s; 552,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 11,400 ft³/s, June 13, 1918, gage height, 4.05 ft, site and datum then in use, from rating curve extended above 5,000 ft³/s; minimum daily, 80 ft³/s, Dec. 27, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,430 ft³/s at 0700 June 11, gage height, 2.97 ft; minimum daily, 176 ft³/s, Dec. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	361	241	244	200	210	200	214	294	990	808	548	396
2	372	231	223	210	200	203	206	317	967	807	536	398
3	392	229	212	220	182	198	215	321	901	775	540	396
4	409	233	216	198	180	200	225	320	1120	792	534	387
5	418	235	231	187	190	192	240	321	1600	819	519	354
6	396	235	235	180	180	190	241	326	1910	937	515	359
7	389	235	236	195	188	190	236	355	1980	814	528	347
8	389	233	202	212	188	195	235	348	1990	754	556	353
9	385	230	209	210	180	202	244	327	2110	979	554	354
10	382	230	220	220	190	210	233	298	2080	864	536	354
11	388	230	198	197	200	200	235	319	2230	756	536	345
12	397	230	184	197	190	187	244	314	2150	652	546	330
13	394	230	184	200	188	185	244	284	1770	596	576	316
14	399	230	198	210	183	188	237	270	1690	557	579	298
15	382	230	215	200	180	193	268	277	1630	552	602	298
16	367	230	210	190	180	191	290	294	1480	549	603	293
17	314	230	176	180	182	188	303	302	1380	559	582	318
18	252	230	227	190	188	193	310	295	1320	540	567	335
19	238	232	207	198	196	192	288	302	1360	546	549	335
20	217	235	200	205	202	194	277	311	1250	524	533	321
21	228	235	198	188	190	196	303	359	1190	520	527	278
22	233	235	228	183	186	204	316	412	1130	525	520	235
23	235	233	199	192	188	212	324	491	1110	512	509	235
24	235	230	197	200	194	215	326	801	1090	593	505	235
25	235	235	195	208	200	218	318	814	1050	707	495	237
26	240	235	178	199	203	227	297	875	1040	699	463	246
27	240	235	184	192	205	232	279	869	1040	661	451	246
28	240	208	193	186	200	232	273	944	965	617	436	306
29	242	211	220	194	---	226	286	1090	930	577	421	330
30	251	241	210	202	---	226	292	987	852	570	396	314
31	242	---	200	215	---	221	---	901	---	554	396	---
TOTAL	9852	6937	6429	6158	5343	6300	7999	14738	42305	20715	16158	9549
MEAN	318	231	207	199	191	203	267	475	1410	668	521	318
MAX	418	241	244	220	210	232	326	1090	2230	979	603	398
MIN	217	208	176	180	180	185	206	270	852	512	396	235
AC-FT	19540	13760	12750	12210	10600	12500	15870	29230	83910	41090	32050	18940

CAL YR 1989 TOTAL 203207 MEAN 557 MAX 1830 MIN 174 AC-FT 403100
WTR YR 1990 TOTAL 152483 MEAN 418 MAX 2230 MIN 176 AC-FT 302400

09118450 COCHETOPA CREEK BELOW ROCK CREEK, NEAR PARLIN, CO

LOCATION.--Lat 38°20'08", long 106°46'18", in SW¼NE¼ sec.17, T.47 N., R.2 E. Saguache County, Hydrologic Unit 14020003, on left bank 0.75 mi downstream from Rock Creek and 12 mi southeast of Parlin.

DRAINAGE AREA.--334 mi².

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 27 to Mar. 2. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of hay meadows upstream from station. Transmountain diversion by Tarbell ditch exports water upstream from station to Saguache Creek, since 1913. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years, 53.8 ft³/s; 38,980 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,120 ft³/s, May 23, 1984, gage height, 4.49 ft; minimum daily, 8.4 ft³/s, Feb. 7, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 175 ft³/s at 1700 June 11, gage height, 2.74 ft, maximum gage height, 3.07 ft at 0300 Dec. 6 (backwater from ice); minimum daily discharge, 10 ft³/s, Feb. 8-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	28	15	15	11	23	24	27	38	30	53	46
2	19	25	16	15	11	20	24	29	37	29	48	45
3	19	22	16	15	11	19	24	38	35	30	48	44
4	19	19	16	14	11	19	25	46	43	34	48	44
5	19	18	17	14	11	23	26	43	83	35	47	44
6	19	18	17	14	11	21	27	38	102	44	46	47
7	19	17	17	14	11	18	30	37	112	51	45	49
8	18	19	16	14	10	18	31	39	102	43	44	47
9	18	19	16	15	10	19	29	39	100	52	43	46
10	17	19	16	17	10	19	29	36	123	44	51	46
11	17	19	15	15	10	19	28	32	166	42	57	45
12	17	19	15	14	10	21	29	34	143	36	59	44
13	17	19	15	14	11	23	29	37	94	34	64	44
14	17	19	16	13	11	23	29	38	73	34	67	43
15	17	19	16	13	11	21	29	39	64	37	73	43
16	17	18	16	13	11	22	30	37	55	41	69	41
17	18	18	16	13	11	22	30	29	51	42	63	43
18	16	18	16	13	11	20	29	26	42	36	60	44
19	16	17	16	13	11	22	29	27	38	41	57	44
20	17	18	15	13	11	23	30	28	33	43	55	43
21	16	19	15	13	11	25	32	29	31	40	60	42
22	15	19	13	13	11	29	27	34	31	37	62	37
23	15	19	13	13	11	27	28	39	30	36	62	35
24	15	18	16	12	12	27	28	45	29	40	61	35
25	15	18	16	12	12	27	28	44	29	56	56	34
26	15	18	13	11	13	24	28	38	29	81	50	39
27	18	17	13	11	14	25	26	40	32	65	48	35
28	19	16	14	11	20	24	26	42	35	52	49	38
29	19	15	15	11	---	24	26	54	35	48	49	46
30	21	15	15	11	---	24	26	50	33	48	48	47
31	25	---	16	11	---	24	---	40	---	51	47	---
TOTAL	549	562	477	410	319	695	836	1154	1848	1332	1689	1280
MEAN	17.7	18.7	15.4	13.2	11.4	22.4	27.9	37.2	61.6	43.0	54.5	42.7
MAX	25	28	17	17	20	29	32	54	166	81	73	49
MIN	15	15	13	11	10	18	24	26	29	29	43	34
AC-FT	1090	1110	946	813	633	1380	1660	2290	3670	2640	3350	2540

CAL YR 1989 TOTAL 8569 MEAN 23.5 MAX 60 MIN 11 AC-FT 17000
WTR YR 1990 TOTAL 11151 MEAN 30.6 MAX 166 MIN 10 AC-FT 22120

09119000 TOMICHI CREEK AT GUNNISON, CO

LOCATION.--Lat 38°31'18", long 106°56'25", in NE¼SW¼ sec.11, T.49 N., R.1 W., Gunnison County, Hydrologic Unit 14020003, on right bank 300 ft downstream from highway bridge, 1.8 mi southwest of Post Office in Gunnison, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--1,061 mi².

PERIOD OF RECORD.--November and December 1910 (gage heights and discharge measurements only), October 1937 to current year. Monthly discharges only for some periods, published in WSP 1313. Published as "near Gunnison" 1910.

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-86-2: 1985.

GAGE.--Water-stage recorder. Datum of gage is 7,628.58 ft above National Geodetic Vertical Datum of 1929. Nov. 25 to Dec. 24, 1910, nonrecording gage 300 ft upstream at different datum. Apr. 20, 1938, to Oct. 2, 1940, water-stage recorder at present site at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 28 to Mar. 12, Apr. 22-24, and June 15-20. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 24,000 acres upstream from station. Water diverted upstream from station by Larkspur ditch to Arkansas River basin since 1935 and by Tarbell ditch to Rio Grande basin since 1914. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--53 years (water years 1938-90), 174 ft³/s; 126,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,620 ft³/s, May 23, 1984, gage height, 5.49 ft; minimum daily, 2.6 ft³/s, Sept. 30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 564 ft³/s at 0600 July 9, gage height, 2.95 ft; minimum daily, 39 ft³/s, Apr. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	73	60	58	50	75	80	117	255	56	157	74
2	54	83	62	56	52	75	80	170	240	56	152	71
3	56	91	66	56	52	78	79	145	221	53	155	60
4	61	102	66	56	50	80	82	100	224	62	146	57
5	68	114	68	54	48	80	86	92	287	91	133	57
6	65	122	70	56	50	84	85	78	385	197	126	59
7	63	111	70	60	52	80	84	68	425	330	124	60
8	60	87	68	60	53	80	88	74	412	294	117	66
9	59	98	70	60	54	85	88	77	419	492	107	63
10	59	110	68	60	54	90	86	77	443	308	98	58
11	58	109	66	58	52	95	70	83	503	216	106	56
12	56	102	62	58	50	100	71	80	485	179	111	55
13	56	98	64	60	52	102	64	76	415	146	118	54
14	56	94	68	58	54	96	58	71	307	128	127	49
15	55	77	64	58	54	94	50	64	250	132	146	47
16	61	64	64	58	50	93	48	71	198	152	154	46
17	80	85	66	56	45	97	46	84	173	189	143	63
18	83	77	66	52	47	95	41	76	152	174	134	80
19	84	76	66	49	50	100	52	67	130	176	137	81
20	81	80	69	52	52	98	55	62	115	169	129	75
21	79	81	70	54	52	107	42	62	106	153	136	79
22	77	81	68	52	55	115	39	63	91	130	124	74
23	77	74	66	52	60	130	40	77	82	126	116	71
24	81	62	66	50	62	120	41	108	85	167	114	74
25	80	72	66	50	64	121	42	168	78	209	112	74
26	81	64	66	50	64	109	48	204	82	227	99	78
27	81	64	68	50	64	109	51	221	61	208	89	83
28	81	62	68	50	70	105	45	235	62	167	87	119
29	76	60	66	50	---	105	50	260	62	161	85	166
30	66	60	63	50	---	94	69	343	59	153	82	157
31	61	---	60	49	---	89	---	305	---	148	77	---
TOTAL	2110	2533	2050	1692	1512	2981	1860	3778	6807	5449	3741	2206
MEAN	68.1	84.4	66.1	54.6	54.0	96.2	62.0	122	227	176	121	73.5
MAX	84	122	70	60	70	130	88	343	503	492	157	166
MIN	54	60	60	49	45	75	39	62	59	53	77	46
AC-FT	4190	5020	4070	3360	3000	5910	3690	7490	13500	10810	7420	4380

CAL YR 1989 TOTAL 40016 MEAN 110 MAX 405 MIN 41 AC-FT 79370
WTR YR 1990 TOTAL 36719 MEAN 101 MAX 503 MIN 39 AC-FT 72830

09124500 LAKE FORK AT GATEVIEW, CO

LOCATION.--Lat 38°17'56", long 107°13'46", in SE¼NE¼ sec.29, T.47 N., R.3 W., Gunnison County, Hydrologic Unit 14020002, on left bank at old village of Gateview, 25 ft downstream from private bridge, 0.2 mi upstream from Indian Creek, and 6.3 mi upstream from waterline of Blue Mesa Reservoir, at elevation 7,519 ft.

DRAINAGE AREA.--334 mi².

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,827.66 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1938, at datum 2.00 ft, higher, and Oct. 1, 1938, to Sept. 30, 1945, at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 16 to Apr. 5. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,600 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--53 years, 238 ft³/s, 172,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,720 ft³/s, July 10, 1983, gage height, 4.18 ft; minimum daily, 22 ft³/s, Jan. 21, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 6	0100	*1,790	*3.26	No other peak greater than base discharge			
Minimum daily, 26 ft ³ /s, Feb. 16, 17.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	54	41	37	31	32	45	89	583	311	100	82
2	61	53	41	37	30	30	47	95	478	299	101	77
3	60	54	42	36	30	30	49	94	518	290	99	73
4	68	56	42	34	32	31	48	109	1060	294	97	74
5	75	57	43	34	32	32	50	115	1490	289	92	74
6	74	56	44	35	32	33	50	135	1550	354	88	76
7	73	55	45	38	31	31	49	187	1460	387	83	73
8	72	54	44	39	29	29	50	237	1470	364	82	78
9	68	53	41	39	29	30	50	245	1480	342	77	78
10	67	55	39	37	30	32	50	226	1540	308	76	75
11	67	55	38	36	31	34	50	216	1560	272	75	74
12	65	54	39	36	30	32	50	198	1340	249	77	71
13	63	53	40	36	30	30	50	187	1130	226	78	69
14	63	52	41	36	30	29	50	203	1020	216	86	66
15	63	47	40	35	28	29	50	254	905	221	108	65
16	67	47	39	33	26	29	53	281	699	194	113	65
17	67	47	38	31	26	30	55	246	604	198	114	68
18	64	48	39	31	28	31	53	245	572	187	111	70
19	61	49	39	32	29	32	58	253	627	202	111	72
20	62	50	38	35	30	34	56	251	577	181	102	73
21	62	50	38	35	31	35	58	284	566	169	122	78
22	61	48	39	34	31	37	62	445	528	160	129	79
23	61	47	40	33	31	37	59	725	512	146	131	77
24	60	49	39	33	31	36	57	964	496	154	122	76
25	60	50	38	34	32	38	54	821	477	155	112	78
26	61	47	37	34	33	40	52	791	442	143	104	93
27	57	47	38	33	34	39	52	772	410	131	99	87
28	58	45	39	32	33	39	54	915	388	123	94	112
29	56	42	40	31	---	41	64	910	368	116	90	149
30	51	42	39	32	---	45	75	629	335	110	89	150
31	52	---	37	32	---	45	---	558	---	103	85	---
TOTAL	1962	1516	1237	1070	850	1052	1600	11680	25185	6894	3047	2432
MEAN	63.3	50.5	39.9	34.5	30.4	33.9	53.3	377	839	222	98.3	81.1
MAX	75	57	45	39	34	45	75	964	1560	387	131	150
MIN	51	42	37	31	26	29	45	89	335	103	75	65
AC-FT	3890	3010	2450	2120	1690	2090	3170	23170	49950	13670	6040	4820

CAL YR 1989 TOTAL 56557 MEAN 155 MAX 756 MIN 37 AC-FT 112200
WTR YR 1990 TOTAL 58525 MEAN 160 MAX 1560 MIN 26 AC-FT 116100

09125800 SILVER JACK RESERVOIR NEAR CIMARRON, CO

LOCATION.--Lat 38°13'58", long 107°32'28", in T.46 N., R. 6 W., Gunnison County, Hydrologic Unit 14020002, in gate house of Silver Jack Dam on Cimarron River, 14.5 mi south of Cimarron, Co.

DRAINAGE AREA.--59 mi²

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in December 1970; dam completed December 1971. Capacity, 13,520 acre-ft, 1971 survey, between elevation 8,800.0 ft, streambed at dam, and 8,925.6 ft, crest of spillway. Dead storage below elevation 8,836.0, 520 acre-ft. Figures given are live contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13,380 acre-ft, June 10, elevation, 8,926.87 ft; minimum contents, 2,520 acre-ft, Sept. 24, elevation, 8,871.55 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400 WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	8,886.07	4,420	-
Oct. 31.	8,873.46	2,740	-1,680
Nov. 30.	8,886.99	4,560	+210
Dec. 31.	8,879.20	3,430	+270
CAL YR 1989	-	-	-1,570
Jan. 31.	8,882.92	3,950	+520
Feb. 28.	8,885.55	4,340	+390
Mar. 31.	8,887.43	4,630	+290
Apr. 30.	8,898.94	6,630	+2,000
May 31.	8,925.75	13,050	+6,420
June 30.	8,925.63	13,010	-40
July 31.	8,914.52	10,020	-2,990
Aug. 31.	8,892.18	5,400	-4,620
Sept. 30.	8,875.21	2,940	-2,460
WTR YR 1990	-	-	-1,480

09126000 CIMARRON RIVER NEAR CIMARRON, CO

LOCATION.--Lat 38°15'36", long 107°32'43", in NW¼NE¼ sec.8, T.46 N., R.6 W., Gunnison County, Hydrologic Unit 14020002, on right bank 100 ft upstream from Forest Service bridge, 0.6 mi upstream from headgate on Cimarron ditch, 2.1 mi downstream from Silver Jack Dam, and 13 mi south of Cimarron.

DRAINAGE AREA.--66.6 mi².

PERIOD OF RECORD.--October 1954 to current year. Prior to October 1965, published as Cimarron Creek near Cimarron.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,631.48 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 12, 1972, at site 0.2 mi downstream, at different datum.

REMARKS.--Estimated daily discharges: Nov. 8-10, 15, 16, 18-20, 22-24, Nov. 27 to Dec. 5, Dec. 8, 11-15, Dec. 26 to Apr. 6. Records good except for estimated daily discharges, which are poor. Diversion upstream from station through Owl Creek ditch into Uncompahgre River basin. Flow regulated by Silver Jack Dam, 2.1 mi upstream since Dec. 23, 1970, total capacity, 13,520 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--16 years (water years 1955-70), 88.6 ft³/s; 64,190 acre-ft/yr, prior to completion of Silver Jack Dam; 20 years (water years 1971-90), 95.6 ft³/s; 69,260 acre-ft/yr, subsequent to completion of Silver Jack Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s, June 28, 1957, gage height, 8.32 ft, site and datum then in use; no flow Dec. 24, 1970, to Jan. 9, 1971 (result of storage in Silver Jack Dam); minimum daily prior to construction of Silver Jack Dam, 8.0 ft³/s, Dec. 27-28, 1962, Jan. 13, 1963; minimum daily, 4.4 ft³/s, Apr. 20-21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 744 ft³/s at 0100 June 6, gage height, 4.66 ft, minimum daily, 6.0 ft³/s, Feb. 17, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	17	8.4	8.6	6.4	7.6	8.0	11	214	122	96	83
2	42	11	8.8	8.2	6.4	7.2	8.2	10	196	139	91	82
3	69	7.7	8.8	8.0	6.4	7.2	8.2	12	256	152	88	82
4	72	7.3	8.8	7.8	6.2	7.4	8.5	14	506	151	88	82
5	70	7.0	8.8	7.6	6.2	7.7	8.5	14	577	151	88	82
6	69	6.8	8.9	6.8	6.4	8.0	8.9	17	619	150	88	81
7	68	6.8	8.8	6.2	6.6	7.6	9.1	17	604	149	96	81
8	67	6.9	9.0	6.2	6.6	7.4	9.2	17	599	151	96	80
9	60	7.0	9.1	6.4	6.6	7.8	8.9	16	622	148	96	80
10	55	7.0	9.0	6.8	6.8	8.0	9.0	16	639	143	95	78
11	55	7.0	9.1	7.0	7.0	7.7	9.5	15	622	143	95	78
12	55	7.9	8.8	7.0	7.0	7.4	9.8	14	548	129	94	77
13	55	7.6	8.8	6.8	7.0	7.2	9.9	14	509	116	94	76
14	55	7.4	9.0	6.5	7.0	7.2	11	28	467	116	94	75
15	55	7.8	9.6	6.2	7.0	7.3	12	42	405	116	95	75
16	41	7.8	10	6.2	6.4	7.6	13	43	287	107	95	75
17	28	7.8	10	6.2	6.0	8.0	12	42	255	101	94	62
18	28	8.3	10	6.2	6.0	8.3	12	41	268	101	92	50
19	28	8.5	10	6.2	6.3	8.6	12	40	273	93	92	50
20	28	8.3	10	6.3	6.7	8.6	13	40	236	83	91	50
21	28	8.0	11	6.4	6.8	8.6	15	67	241	79	91	50
22	28	8.2	10	6.4	6.8	8.4	15	90	223	78	90	49
23	26	8.4	10	6.4	6.8	8.4	14	91	217	93	89	49
24	23	8.3	10	6.4	7.0	8.2	13	106	214	105	88	29
25	23	8.3	10	6.4	7.2	8.2	14	116	201	101	87	13
26	23	8.2	9.6	6.4	7.4	7.8	12	116	178	99	86	13
27	23	8.4	9.4	6.4	7.6	7.8	11	116	165	99	86	12
28	23	8.4	9.4	6.4	7.9	7.8	11	117	143	98	85	14
29	23	8.2	9.4	6.4	---	7.8	12	122	138	98	85	13
30	19	8.1	9.4	6.4	---	7.8	12	121	129	98	84	12
31	17	---	9.2	6.4	---	7.9	---	150	---	97	84	---
TOTAL	1266	245.4	291.1	207.6	188.5	242.5	329.7	1675	10551	3606	2813	1733
MEAN	40.8	8.18	9.39	6.70	6.73	7.82	11.0	54.0	352	116	90.7	57.8
MAX	72	17	11	8.6	7.9	8.6	15	150	639	152	96	83
MIN	10	6.8	8.4	6.2	6.0	7.2	8.0	10	129	78	84	12
AC-FT	2510	487	577	412	374	481	654	3320	20930	7150	5580	3440

CAL YR 1989 TOTAL 21523.0 MEAN 59.0 MAX 399 MIN 6.8 AC-FT 42690
WTR YR 1990 TOTAL 23148.8 MEAN 63.4 MAX 639 MIN 6.0 AC-FT 45920

09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO

LOCATION.--Lat 38°31'45", long 107°38'54", in NE¼NW¼ sec.10, T.49 N., R.7 W., Montrose County, Hydrologic Unit 14020002, on left bank 0.4 mi downstream from east portal of Gunnison tunnel, 4.7 mi downstream from Crystal Creek, and 12 mi northeast of Montrose.

DRAINAGE AREA.--3,965 mi².

PERIOD OF RECORD.--October 1903 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at east portal of Gunnison tunnel" 1905-6 and as "at River portal" 1907-11.

REVISED RECORDS.--WSP 1313: 1906(M). WSP 1733: 1918-19, 1948. WSP 2124: Drainage area. WDR CO-77-2: 1926, 1941.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,526.06 ft above National Geodetic Vertical Datum of 1929. Apr. 9, 1905, to Aug. 20, 1915, nonrecording gage at site 300 ft upstream from diversion dam at east portal of Gunnison tunnel, at different datum. Aug. 21, 1915, to Jan. 19, 1943, nonrecording gage at site 500 ft downstream from diversion dam at east portal of Gunnison tunnel, at different datum. Jan. 30, 1943, to Sept. 1956, water-stage recorder at present site at datum 1.0 ft, higher.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, transbasin diversion through Gunnison tunnel for irrigation of about 75,000 acres in Uncompahgre Valley (see table below for figures of diversion), Taylor Park Reservoir (station 09108500), Blue Mesa Reservoir (station 09124600), Morrow Point Reservoir (station 09125400), Crystal Reservoir (station 09127600), diversions for irrigation of about 63,000 acres, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Diversions, in acre-feet, through Gunnison tunnel; provided by Uncompahgre Valley Water Users Association.

AVERAGE DISCHARGE.--87 years, 1,372 ft³/s; 994,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 19,000 ft³/s, June 15, 1921, gage height, about 15.8 ft, present datum, from rating curve extended above 14,000 ft³/s; no flow Sept. 25, 26, 1936, Oct. 8, 1949, Sept. 5, 6, 15, 16, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,150 ft³/s at 1415 Nov. 6, gage height, 3.45 ft; minimum daily, 257 ft³/s, Sept. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	500	338	331	341	324	306	310	278	309	309	301	291
2	500	354	331	341	324	303	292	292	312	305	292	294
3	473	400	333	350	324	299	348	297	303	291	301	295
4	424	402	334	346	324	305	342	281	306	300	300	298
5	432	445	334	345	324	306	313	295	312	303	304	301
6	916	570	335	345	324	306	297	296	319	301	305	288
7	737	306	338	345	328	306	301	353	289	306	298	291
8	739	292	338	345	334	308	298	331	297	305	298	294
9	747	292	341	345	334	310	298	298	282	300	297	294
10	750	291	299	345	334	310	313	298	282	300	296	281
11	660	297	276	345	311	310	304	299	278	296	293	257
12	550	297	289	345	278	298	368	297	280	297	296	301
13	536	299	334	345	336	333	391	300	284	296	296	366
14	542	299	336	345	422	472	398	299	285	306	288	383
15	544	299	338	305	319	375	400	303	282	304	296	377
16	544	299	338	296	288	320	377	304	309	302	294	372
17	544	299	338	334	282	313	347	309	310	297	292	388
18	544	302	339	509	289	336	324	316	302	301	289	400
19	564	303	341	356	289	340	310	314	298	288	290	441
20	589	293	341	341	290	299	313	314	301	285	290	463
21	591	264	341	341	292	294	322	317	302	299	295	506
22	592	298	341	339	292	296	326	319	302	299	283	521
23	495	324	341	338	294	296	332	320	300	310	287	517
24	313	324	341	337	297	299	318	311	303	293	293	352
25	400	325	341	335	299	294	324	308	298	295	291	282
26	464	329	341	338	302	297	302	311	300	298	292	491
27	363	331	341	335	303	348	292	309	301	291	292	533
28	274	331	341	334	303	323	291	303	311	303	293	654
29	275	331	341	332	---	324	291	289	317	308	293	416
30	297	331	341	327	---	326	295	303	317	309	291	414
31	330	---	341	327	---	323	---	307	---	311	291	---
TOTAL	16229	9865	10335	10652	8760	9875	9737	9471	8991	9308	9117	11361
MEAN	524	329	333	344	313	319	325	306	300	300	294	379
MAX	916	570	341	509	422	472	400	353	319	311	305	654
MIN	274	264	276	296	278	294	291	278	278	285	283	257
AC-FT	32190	19570	20500	21130	17380	19590	19310	18790	17830	18460	18080	22530
a	43580	3260	0	0	0	9380	15540	60320	58600	69830	61400	47020

CAL YR 1989 TOTAL 135618 MEAN 372 MAX 1590 MIN 264 AC-FT 269000
WTR YR 1990 TOTAL 123701 MEAN 339 MAX 916 MIN 257 AC-FT 245400

a-Diversion, in acre-feet, through Gunnison Tunnel, provided by Uncompahgre Valley Water Users Association.

09128500 SMITH FORK NEAR CRAWFORD, CO

LOCATION.--Lat 38°43'40", long 107°30'22", in SW¼SE¼ sec.24, T.15 S., R.91 W., Delta County, Hydrologic Unit 14020002, on left bank 20 ft upstream from Forest Service bridge, 0.4 mi upstream from Second Creek, 6 mi northeast of Crawford, and 6.5 mi upstream from Iron Creek.

DRAINAGE AREA.--42.8 mi².

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1941. WDR CO-83-2: Drainage area. WDR CO-85-2: 1984, 1984 (M).

GAGE.--Water-stage recorder. Elevation of gage is 7,091 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 16, 1938, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Nov. 27 to Dec. 14, Dec. 17, Dec. 24 to Jan. 25, Jan. 28-30, Feb. 3, 6, 8, 9, 11, 15, 16, 19, 21-26, Mar. 1, 6, 7, 14-17, Sept. 17-30. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of a few small hay meadows upstream from station. Saddle Mountain ditch diverts water upstream from station for irrigation of about 800 acres downstream. One small ditch diverts water from Virginia Creek to Iron Creek drainage. Head and Ferrier ditch imports water from Curecanti Creek drainage. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--55 years, 41.9 ft³/s; 30,360 acre-ft/yr. The figures published in the 1985 report were in error; the correct figures are: 49 years, 41.9 ft³/s, 30,360 acre-ft/yr; 50 years, 42.4 ft³/s, 30,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft³/s, May 15, 1984, gage height, 8.28 ft, but may have been higher during period of indefinite stage-discharge relationship, May 16-21, 1984; minimum daily discharge, 1.8 ft³/s, July 30 to Aug. 1, 1963, Sept. 5, 6, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 260 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 24	0525	*108	*2.32				

Minimum daily, 4.0 ft³/s, Feb. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	7.1	4.7	6.3	4.8	6.1	13	50	59	13	9.5	10
2	5.6	6.0	4.7	6.3	4.9	6.1	14	53	57	15	10	10
3	5.3	6.5	4.7	5.9	5.2	6.0	16	56	57	14	9.5	10
4	6.6	6.7	4.9	5.9	6.2	6.6	18	57	59	14	8.7	9.3
5	7.1	6.9	5.1	6.0	5.2	6.8	21	57	75	13	8.0	11
6	6.7	7.0	5.3	6.0	4.5	6.8	20	65	82	18	8.0	20
7	6.7	6.9	5.7	6.3	4.4	6.7	21	83	81	20	8.4	17
8	6.3	6.5	5.5	6.3	4.2	6.6	28	87	75	21	8.2	15
9	6.3	6.7	5.7	6.1	4.3	6.3	32	85	73	24	8.1	14
10	6.2	6.6	5.7	6.0	4.6	7.0	29	80	68	20	7.9	13
11	6.2	6.5	5.1	6.0	4.2	8.4	29	84	66	18	7.9	12
12	6.5	6.5	5.1	6.0	4.2	7.6	31	78	64	17	9.4	11
13	6.6	6.2	5.6	6.1	4.3	7.9	29	72	57	17	17	10
14	6.5	6.1	6.2	6.1	4.4	7.4	29	72	53	16	14	9.8
15	6.6	4.5	7.0	6.0	4.0	6.8	33	81	49	16	15	9.6
16	9.2	4.6	6.2	6.0	4.5	6.2	42	84	47	15	15	10
17	8.5	5.6	6.0	5.9	5.2	5.7	47	72	41	14	13	12
18	7.6	4.9	6.1	5.6	5.0	5.2	47	71	35	13	15	14
19	7.2	5.1	6.1	6.0	4.5	5.6	54	74	36	14	15	15
20	6.8	4.7	6.2	5.9	4.6	6.3	58	79	33	13	14	13
21	6.8	4.9	6.4	5.7	4.2	8.4	66	86	30	12	14	12
22	7.7	4.5	6.2	5.7	4.1	9.9	71	96	28	11	13	11
23	7.5	4.3	6.2	6.0	4.3	12	72	94	27	11	14	12
24	7.0	4.8	6.0	6.1	4.5	12	78	103	25	12	13	13
25	6.9	4.9	6.0	5.8	5.0	12	69	99	22	14	12	14
26	8.0	5.0	6.2	7.2	5.5	13	61	88	20	12	12	13
27	7.7	4.8	6.2	6.6	5.9	13	54	75	20	11	11	12
28	7.5	4.5	6.5	5.7	6.1	13	52	77	18	10	11	11
29	7.0	4.2	6.3	6.1	---	12	53	82	16	9.8	9.9	13
30	6.3	4.5	6.0	6.0	---	12	52	69	15	9.7	10	14
31	6.5	---	6.0	5.7	---	12	---	60	---	9.7	11	---
TOTAL	213.0	168.0	179.6	187.3	132.8	261.4	1239	2369	1388	447.2	352.5	370.7
MEAN	6.87	5.60	5.79	6.04	4.74	8.43	41.3	76.4	46.3	14.4	11.4	12.4
MAX	9.2	7.1	7.0	7.2	6.2	13	78	103	82	24	17	20
MIN	5.3	4.2	4.7	5.6	4.0	5.2	13	50	15	9.7	7.9	9.3
AC-FT	422	333	356	372	263	518	2460	4700	2750	887	699	735

CAL YR 1989 TOTAL 9227.8 MEAN 25.3 MAX 150 MIN 4.2 AC-FT 18300
WTR YR 1990 TOTAL 7308.5 MEAN 20.0 MAX 103 MIN 4.0 AC-FT 14500

09131495 PAONIA RESERVOIR NEAR BARDINE, CO

LOCATION.--Lat 38°56'39", long 107°21'06", in NE¼ sec.8, T.13 S., R.89 W., Gunnison County, Hydrologic Unit 14020004, in gate house of Paonia Dam on Muddy Creek, 16 mi east of Paonia.

DRAINAGE AREA.--246 mi²

PERIOD OF RECORD.--December 1961 to current year. Monthend active contents provided by U.S. Bureau of Reclamation from December 1961 to September 1987.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in December 1961; dam completed January 1962. Capacity 20,950 acre-ft, 1966 survey, between elevation 6,290.0 ft streambed at dam, and 6,447.5 ft, crest of spillway. Dead storage below elevation 6,358.0 ft, 2,440 acre-ft. Inactive storage below elevation 6,360.0 ft, 2,620 acre-ft. Figures published prior to 1988 water year are active contents; figures given beginning 1988 water year are live contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,690 acre-ft, June 6, 7, elevation, 6,448.04 ft; minimum contents, 887 acre-ft, Sept. 4, 5, elevation, 6,367.17 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400 WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	6,370.99	1,310	-
Oct. 31.	6,379.57	2,393	+1,083
Nov. 30.	6,392.03	4,280	+440
Dec. 31.	6,383.26	2,916	+523
CAL YR 1989	-	-	-1,364
Jan. 31.	6,390.55	4,044	+825
Feb. 28.	6,396.82	5,133	+1,089
Mar. 31.	6,410.22	7,911	+2,778
Apr. 30.	6,443.57	17,220	+9,309
May 31.	6,447.67	18,570	+1,350
June 30.	6,447.71	18,580	+10
July 31.	6,429.67	12,970	-5,610
Aug. 31.	6,380.99	2,592	-10,378
Sept. 30.	6,374.45	1,730	-862
WTR YR 1990	-	-	+420

09132500 NORTH FORK GUNNISON RIVER NEAR SOMERSET, CO

LOCATION.--Lat 38°55'33", long 107°26'01", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.13 S., R.90 W., Gunnison County, Hydrologic Unit 14020004, on left bank 2.3 mi east of Somerset and 4.8 mi upstream from Hubbard Creek.

DRAINAGE AREA.--526 mi².

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313. Water-quality data available, October 1977 to September 1982. Sediment data available, November 1978 to September 1982.

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-77-2: 1976.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,280 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1982, at various sites 0.8 mi downstream, at different datums. See WDR CO-81-2, for history of changes.

REMARKS.--Estimated daily discharges: Oct. 17- Mar. 8. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by small diversions for irrigation in nearby drainage areas, irrigation of about 3,000 acres upstream from station, storage in Overland Reservoir, capacity, 6,280 acre-ft, and storage in Paonia Reservoir, capacity, 18,300 acre-ft, since February 1962. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--57 years, 455 ft³/s; 329,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,220 ft³/s, May 24, 1984, gage height, 8.20 ft, from outside high-water mark; minimum daily, 17 ft³/s, Nov. 10, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,490 ft³/s at 0030 June 6, gage height, 4.39 ft; minimum daily, 23 ft³/s, Mar. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	38	39	25	32	44	69	256	723	240	252	236
2	58	34	39	31	30	44	112	284	626	240	255	236
3	57	36	39	32	25	43	159	326	629	237	256	181
4	63	34	41	24	27	45	178	452	889	264	251	78
5	65	34	47	25	32	44	161	549	1190	237	244	79
6	63	34	55	26	28	44	126	690	1290	244	244	80
7	61	34	54	27	33	43	132	933	1270	238	244	80
8	61	33	48	31	30	42	153	976	1250	262	244	77
9	61	37	50	32	25	32	171	857	1220	274	240	74
10	63	35	50	30	33	37	157	725	1180	239	240	72
11	65	35	38	28	31	39	154	699	1170	233	240	69
12	63	35	37	28	30	30	166	636	1110	228	240	70
13	64	35	42	29	30	27	167	566	926	234	240	70
14	63	35	44	30	30	23	159	555	856	252	240	66
15	63	33	45	29	29	26	202	643	762	259	248	66
16	79	33	39	28	25	25	244	677	610	251	251	66
17	68	38	35	27	30	25	280	607	553	244	248	83
18	60	36	39	25	30	28	261	589	538	248	242	97
19	56	38	39	33	28	29	289	583	543	251	240	110
20	56	37	38	32	34	35	339	642	472	253	238	91
21	56	36	38	30	32	42	397	739	448	248	240	84
22	60	35	39	30	31	49	414	915	423	248	236	81
23	56	35	36	34	33	63	428	1050	402	250	233	77
24	52	36	35	35	36	68	437	1240	387	254	232	77
25	48	35	31	30	36	68	379	1170	349	274	239	73
26	50	38	30	35	38	68	343	1100	334	260	241	72
27	46	37	32	30	37	75	299	988	311	248	242	72
28	48	34	32	25	42	75	277	989	283	240	243	73
29	42	31	34	32	---	73	285	1000	261	238	240	75
30	34	36	30	31	---	70	265	749	234	247	234	72
31	36	---	25	33	---	68	---	637	---	251	236	---
TOTAL	1776	1057	1220	917	877	1424	7203	22822	21239	7686	7513	2737
MEAN	57.3	35.2	39.4	29.6	31.3	45.9	240	736	708	248	242	91.2
MAX	79	38	55	35	42	75	437	1240	1290	274	256	236
MIN	34	31	25	24	25	23	69	256	234	228	232	66
AC-FT	3520	2100	2420	1820	1740	2820	14290	45270	42130	15250	14900	5430

CAL YR 1989 TOTAL 122437 MEAN 335 MAX 1990 MIN 25 AC-FT 242900
WTR YR 1990 TOTAL 76471 MEAN 210 MAX 1290 MIN 23 AC-FT 151700

09134000 MINNESOTA CREEK NEAR PAONIA, CO

LOCATION.--Lat 38°52'12", long 107°30'13", in SE¼NE¼ of sec.1, T. 14 S., R. 91 W., Delta County, Hydrologic Unit 14020004, on right bank .25 mi downstream from South Fork, 6 mi upstream from mouth, and 4.5 mi east of Paonia.

DRAINAGE AREA.--41.3 mi².

PERIOD OF RECORD.--April 1936 to September 1947, October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,200 ft above National Geodetic Vertical Datum of 1929, from topographic map. April 1936 to October 1941, staff gages at different datums. October 1941 to September 1947, water-stage recorder at different datum. December 1985 to present, water-stage recorder, datum lowered 2.0 ft.

REMARKS.--Estimated daily discharges: Nov. 16 to Mar. 6. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by two small storage reservoirs, one of which obtains water from the East Muddy Creek Basin. Small trans-basin diversion from Coal Creek into Minnesota Creek. Diversions upstream from station for irrigation of about 100 acres. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--16 years (water years 1936-47, 1986-90), 23.1 ft³/s; 16,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 356 ft³/s, July 10, 1936 (gage height, 3.00 ft, site and datum then in use); minimum daily, 1.1 ft³/s, Sept. 6, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 52 ft³/s at 1730 May 25, gage height, 1.70 ft, from maximum indicator; minimum daily, 1.1 ft³/s, Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	4.7	1.8	1.5	2.5	2.9	4.5	11	31	19	4.5	1.9
2	2.4	3.3	1.8	1.8	2.5	2.9	4.1	12	25	18	6.6	1.6
3	2.7	3.9	1.8	1.8	2.5	2.9	5.2	11	25	18	6.3	1.6
4	4.5	4.1	1.9	1.4	2.4	2.9	5.9	10	29	16	6.0	1.5
5	4.3	4.1	2.0	1.4	2.4	2.7	6.0	9.7	34	12	5.9	1.3
6	5.2	4.1	2.1	1.5	2.4	2.7	5.2	11	34	11	7.5	1.1
7	4.4	4.1	1.8	1.7	2.4	2.9	5.0	20	32	16	13	2.5
8	4.4	3.9	1.7	1.7	2.4	2.9	6.3	19	32	16	8.6	9.1
9	5.1	4.4	2.0	1.6	2.4	3.0	6.9	19	37	17	7.6	12
10	4.5	4.3	2.0	1.5	2.3	3.5	5.7	19	39	16	4.8	8.4
11	4.3	4.2	1.4	1.5	2.4	3.5	5.2	20	39	16	4.5	7.1
12	4.2	4.2	1.3	1.5	2.4	2.7	5.3	19	40	15	3.2	6.6
13	4.4	4.2	1.9	1.5	2.4	2.7	5.4	18	30	15	3.3	5.8
14	4.3	4.2	2.0	1.6	2.4	4.1	5.3	18	23	15	3.7	2.8
15	4.8	2.7	2.0	1.6	2.4	3.1	6.2	16	22	14	7.4	1.9
16	7.7	2.1	1.8	1.5	2.2	3.5	7.2	17	20	14	5.4	1.9
17	5.6	2.3	1.5	1.5	2.5	3.0	7.6	16	19	13	3.7	5.4
18	4.9	2.1	1.9	1.2	2.6	2.5	7.4	16	20	13	3.9	3.6
19	4.5	2.2	1.9	1.6	2.6	2.5	9.8	21	20	13	4.0	4.7
20	4.4	2.2	1.8	1.5	2.5	3.0	8.7	24	19	13	3.2	2.7
21	4.6	2.1	1.8	1.3	2.5	3.6	8.6	24	16	13	2.9	2.5
22	6.2	2.1	1.9	1.5	2.5	4.1	9.2	34	16	13	2.9	2.1
23	4.8	2.1	1.7	1.9	2.7	4.8	9.8	41	17	13	3.1	2.1
24	4.1	2.1	1.7	2.1	2.7	4.8	11	47	16	13	2.8	2.8
25	4.0	2.0	1.5	2.0	2.8	4.6	10	46	18	13	2.4	11
26	5.5	2.2	1.5	2.3	2.9	4.6	9.2	45	21	12	2.2	2.8
27	4.7	2.1	1.7	2.1	2.9	4.7	8.3	38	22	13	2.1	2.3
28	4.7	1.7	1.7	1.8	2.9	4.7	7.9	37	21	13	2.0	3.2
29	4.5	1.4	2.0	2.3	---	4.8	9.4	34	20	13	2.0	2.8
30	3.7	1.7	1.8	2.4	---	4.8	9.1	31	19	10	1.9	2.5
31	4.1	---	1.5	2.5	---	4.7	---	29	---	3.5	1.9	---
TOTAL	140.4	90.8	55.2	53.1	70.5	110.1	215.4	732.7	756	429.5	139.3	117.6
MEAN	4.53	3.03	1.78	1.71	2.52	3.55	7.18	23.6	25.2	13.9	4.49	3.92
MAX	7.7	4.7	2.1	2.5	2.9	4.8	11	47	40	19	13	12
MIN	2.4	1.4	1.3	1.2	2.2	2.5	4.1	9.7	16	3.5	1.9	1.1
AC-FT	278	180	109	105	140	218	427	1450	1500	852	276	233

CAL YR 1989 TOTAL 4726.5 MEAN 12.9 MAX 53 MIN 1.3 AC-FT 9380
WTR YR 1990 TOTAL 2910.6 MEAN 7.97 MAX 47 MIN 1.1 AC-FT 5770

09135900 LEROUX CREEK AT HOTCHKISS, CO

LOCATION.--Lat 38°47'53", long 107°43'53", in NW¼NE¼ sec.36, T.14 S., R.93 W., Delta County, Hydrologic Unit 14020004, on left bank at upstream side of culvert, 0.3 mi west of Hotchkiss city limits, and 0.5 mi upstream from mouth.

DRAINAGE AREA.--66.7 mi².

PERIOD OF RECORD.--June 1976 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5,315 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 30 to Feb. 25, Mar. 9 to May 10. Records fair except for estimated daily discharges, which are poor. Natural flow of stream is affected by diversions upstream from station for irrigation and by return flow from irrigated area upstream from station. Mostly return flow after June. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 30.8 ft³/s; 22,310 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft³/s, June 7, 1984, gage height, 11.82 ft; minimum daily, 0.55 ft³/s, July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 77 ft³/s at 0100 May 24, gage height, 3.63 ft; minimum daily, 1.8 ft³/s, Mar. 30, 31

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	9.4	11	6.4	4.9	4.3	1.9	3.0	2.2	2.9	5.2	6.3
2	5.7	10	11	6.2	4.9	4.3	2.1	3.4	2.3	3.4	5.1	5.5
3	5.7	11	10	6.3	4.8	4.2	2.1	3.6	2.5	3.7	5.1	5.6
4	5.7	11	10	6.0	4.8	4.2	2.2	3.5	2.8	3.7	5.0	5.7
5	5.8	11	9.2	6.0	4.8	4.0	2.1	3.5	2.7	3.1	5.2	5.5
6	6.4	11	7.8	6.0	5.0	3.7	2.0	3.8	2.9	2.9	5.0	5.8
7	6.6	11	8.2	5.9	5.0	3.5	2.0	4.1	3.3	2.9	5.0	5.7
8	6.8	11	7.7	6.0	4.8	2.9	2.0	3.8	3.2	3.4	5.1	5.7
9	6.9	11	7.6	6.0	4.8	3.0	2.0	3.3	3.5	3.5	4.6	5.6
10	6.8	11	7.5	6.0	4.9	3.1	1.9	2.6	3.4	2.9	4.4	5.8
11	6.9	12	7.5	6.3	4.6	3.1	1.9	2.7	3.6	3.2	4.5	5.7
12	6.8	12	7.7	6.0	4.6	2.8	2.0	2.7	4.0	3.5	4.6	5.7
13	6.8	12	8.0	5.9	4.6	2.5	2.0	2.6	4.1	3.8	5.5	5.7
14	6.8	12	8.2	6.0	4.7	2.3	1.9	2.2	3.6	4.0	5.5	5.9
15	7.5	11	8.1	6.4	4.3	2.0	2.3	7.9	3.4	4.0	6.5	6.2
16	9.0	11	8.1	5.9	4.5	2.1	2.7	2.5	3.3	4.0	6.3	6.3
17	7.3	12	7.8	5.9	4.5	2.1	2.7	2.4	3.4	4.1	6.3	7.0
18	6.7	11	7.6	5.7	4.3	2.2	2.9	3.6	3.3	3.9	5.9	6.8
19	7.5	11	7.1	5.6	4.5	2.3	3.0	2.6	3.3	4.1	6.0	7.5
20	7.7	11	6.9	5.8	4.5	2.4	3.1	2.6	3.0	4.0	6.4	7.4
21	9.0	11	7.1	6.0	4.1	2.5	3.2	4.6	2.9	4.0	6.6	8.2
22	11	11	7.2	5.6	4.1	2.2	3.2	15	2.5	4.1	6.4	7.7
23	11	11	6.9	5.6	4.2	2.2	3.0	26	2.4	3.8	6.7	7.7
24	11	12	7.1	5.4	4.3	2.3	2.9	31	2.6	3.9	6.8	8.1
25	11	12	7.1	5.0	4.4	2.1	2.9	17	2.5	3.8	7.2	8.1
26	11	12	6.7	5.0	4.3	2.1	2.8	4.1	2.6	3.9	7.7	8.0
27	10	12	6.7	4.9	4.2	2.4	2.4	3.7	3.0	4.3	8.4	8.1
28	10	12	6.7	5.0	4.3	2.3	2.3	3.3	3.0	4.7	8.5	8.0
29	9.9	12	6.6	4.8	---	2.1	2.9	3.0	2.8	4.6	9.0	7.9
30	9.1	12	6.7	4.8	---	1.8	2.9	2.5	2.8	4.5	8.4	7.6
31	9.3	---	6.4	4.9	---	1.8	---	2.3	---	4.8	8.2	---
TOTAL	247.4	339.4	242.2	177.3	127.7	84.8	73.3	178.9	90.9	117.4	191.1	200.8
MEAN	7.98	11.3	7.81	5.72	4.56	2.74	2.44	5.77	3.03	3.79	6.16	6.69
MAX	11	12	11	6.4	5.0	4.3	3.2	31	4.1	4.8	9.0	8.2
MIN	5.7	9.4	6.4	4.8	4.1	1.8	1.9	2.2	2.2	2.9	4.4	5.5
AC-FT	491	673	480	352	253	168	145	355	180	233	379	398

CAL YR 1989 TOTAL 2878.2 MEAN 7.89 MAX 126 MIN 1.9 AC-FT 5710
WTR YR 1990 TOTAL 2071.2 MEAN 5.67 MAX 31 MIN 1.8 AC-FT 4110

09143000 SURFACE CREEK NEAR CEDAREGE, CO

LOCATION.--Lat 38°59'05", long 107°51'13", in NW¼NW¼ sec.25, T.12 S., R.94 W., Delta County, Hydrologic Unit 14020005, on left bank 5 ft downstream from private bridge, 1.4 mi downstream from Caesar Creek, and 7.0 mi northeast of Cedaredge.

DRAINAGE AREA.--27.4 mi².

PERIOD OF RECORD.--July 1939 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WDR CO-83-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,261 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 27 to Apr. 8. Records good except for estimated daily discharges, which are poor. Flow regulated by many small reservoirs. Some water imported from Leon Lake in Plateau Creek drainage. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--51 years, 42.8 ft³/s; 31,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 824 ft³/s, June 7, 1984, gage height, 3.67 ft, from rating curve extended above 310 ft³/s; maximum gage height, 5.10 ft, Apr. 13, 1958 (ice jam); minimum daily discharge, 0.80 ft³/s, Jan. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 119 ft³/s at 2000 June 4, gage height, 2.15 ft, maximum gage height, 2.33 ft at 1600 Mar. 23 (backwater from ice); minimum daily discharge, 1.1 ft³/s, Nov. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	1.9	1.7	2.9	3.9	4.0	4.8	16	96	51	36	36
2	11	1.8	1.7	3.3	3.8	4.0	5.2	17	97	51	39	37
3	8.5	1.9	1.7	3.4	3.5	4.0	6.4	20	100	62	40	37
4	10	1.7	1.9	3.1	3.6	4.0	8.4	25	104	62	43	30
5	9.7	1.7	2.2	3.2	3.9	3.7	8.8	34	101	66	48	31
6	9.3	1.7	2.5	3.3	3.7	3.7	8.4	53	100	65	48	33
7	13	1.7	2.4	3.4	4.1	3.6	8.8	62	94	48	57	31
8	13	1.6	2.5	3.7	4.0	3.5	10	51	91	51	59	15
9	12	1.8	2.8	3.8	3.6	3.6	8.9	47	86	51	71	12
10	8.8	1.7	2.8	3.7	4.0	3.7	8.8	53	90	49	75	12
11	8.2	1.7	2.2	3.6	3.9	3.8	10	47	87	48	72	29
12	7.8	1.7	2.2	3.6	3.8	3.7	11	35	79	37	72	29
13	8.0	1.7	2.8	3.7	3.8	3.6	12	37	74	33	73	27
14	9.5	1.7	2.9	3.8	3.8	3.4	16	51	61	36	71	27
15	11	1.6	3.0	3.7	3.7	3.5	25	49	57	38	69	18
16	12	1.6	2.8	3.6	3.5	3.5	35	39	55	38	65	17
17	9.4	1.8	2.6	3.5	3.8	3.5	39	43	53	39	65	18
18	9.1	1.7	3.0	3.3	3.8	3.5	32	45	50	39	51	26
19	9.3	1.8	3.0	3.8	3.7	3.5	32	44	46	38	49	28
20	9.3	1.7	2.9	3.7	4.0	3.6	36	49	42	36	49	20
21	9.2	1.6	2.9	3.5	3.9	4.0	49	57	34	37	34	19
22	12	1.6	3.0	3.5	3.8	4.3	57	63	33	37	33	17
23	10	1.6	2.9	3.8	3.8	4.7	52	69	56	37	19	17
24	8.4	1.6	2.9	4.0	3.9	4.7	45	70	58	20	16	17
25	8.0	1.5	2.7	3.8	4.0	4.6	32	78	57	21	19	18
26	7.9	1.6	2.7	4.0	4.0	4.5	27	75	65	24	19	17
27	7.4	1.5	3.0	3.8	4.0	4.7	22	74	64	25	19	12
28	6.9	1.2	3.1	3.5	4.0	4.7	20	81	45	27	29	12
29	2.5	1.1	3.3	3.8	---	4.6	22	94	46	27	28	13
30	1.7	1.4	3.1	3.8	---	4.5	18	85	51	27	23	13
31	1.8	---	2.9	3.9	---	4.4	---	96	---	34	26	---
TOTAL	275.7	49.2	82.1	111.5	107.3	123.1	670.5	1659	2072	1254	1417	668
MEAN	8.89	1.64	2.65	3.60	3.83	3.97	22.3	53.5	69.1	40.5	45.7	22.3
MAX	13	1.9	3.3	4.0	4.1	4.7	57	96	104	66	75	37
MIN	1.7	1.1	1.7	2.9	3.5	3.4	4.8	16	33	20	16	12
AC-FT	547	98	163	221	213	244	1330	3290	4110	2490	2810	1320

CAL YR 1989 TOTAL 11225.1 MEAN 30.8 MAX 141 MIN 1.1 AC-FT 22260
WTR YR 1990 TOTAL 8489.4 MEAN 23.3 MAX 104 MIN 1.1 AC-FT 16840

09143500 SURFACE CREEK AT CEDAREGE, CO

LOCATION.--Lat 38°54'06", long 107°55'14", in SW¼SE¼ sec.20, T.13 S., R.94 W., Delta County, Hydrologic Unit 14020005, on left bank at Cedaredge, 700 ft east of State Highway 65, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--39.0 mi².

PERIOD OF RECORD.--October 1916 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WDR CO-83-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Elevation of gage is 6,220 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 8, 1917, nonrecording gage at present site at datum 0.50 ft, higher.

REMARKS.--Estimated daily discharges: Dec. 13-15, Jan. 1-6, 10, 22, 24-28, Feb. 15, 16, 22-26. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions to and from nearby streams, many small storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--74 years, 28.0 ft³/s; 20,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft³/s, May 13, 1941; gage height, 2.50 ft, from rating curve extended above 640 ft³/s; no flow, Sept. 25, 1939, and practically no flow at times during some winters.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 78 ft³/s at 2130 May 6, gage height, 1.61 ft; minimum daily, 1.1 ft³/s, Dec. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	2.4	3.0	3.2	4.7	3.4	4.7	21	61	23	15	6.2
2	5.3	1.6	2.9	3.2	4.1	2.7	4.8	23	56	22	17	6.1
3	4.3	3.2	2.6	3.5	3.7	2.5	7.4	25	56	34	18	6.4
4	4.8	3.7	2.8	3.3	3.9	2.7	7.6	25	58	34	25	7.8
5	5.0	2.7	2.9	3.0	4.0	2.7	9.2	31	59	38	30	9.2
6	4.3	2.7	2.9	3.0	4.3	2.9	12	48	59	39	31	10
7	8.8	2.4	2.9	2.7	4.4	2.4	14	58	55	27	32	8.1
8	10	1.9	3.3	3.4	4.2	1.7	16	50	53	28	32	6.5
9	10	2.6	3.1	4.6	4.6	2.9	12	46	50	28	34	6.1
10	6.3	2.3	2.7	4.7	4.1	3.4	9.9	48	54	19	35	5.5
11	3.6	2.4	2.5	4.8	4.4	3.8	13	48	53	15	34	7.8
12	3.9	2.4	3.3	4.6	4.4	3.1	14	35	50	11	33	7.3
13	4.1	2.3	3.4	4.5	4.3	2.8	15	34	49	11	34	5.8
14	3.9	2.1	3.5	4.6	4.3	3.2	17	42	44	14	35	5.5
15	4.5	1.2	3.5	4.4	4.4	2.9	27	44	43	15	37	5.9
16	8.2	1.8	3.2	4.4	4.5	2.8	32	37	38	15	30	6.7
17	6.5	3.6	3.2	4.5	4.6	2.7	34	38	34	17	30	8.8
18	6.2	3.5	2.9	4.4	4.2	2.7	25	43	32	17	25	10
19	5.5	3.1	2.1	4.2	4.8	2.8	26	40	24	14	23	14
20	5.3	2.8	1.8	4.0	4.1	3.4	28	45	21	10	23	9.5
21	4.7	2.7	1.4	4.5	4.5	4.1	39	47	22	8.0	19	6.3
22	6.7	2.4	2.1	4.5	4.4	4.9	50	51	22	6.4	19	5.9
23	6.6	2.3	2.3	4.6	4.2	6.0	48	55	23	6.0	11	5.8
24	5.2	2.6	2.4	4.4	4.1	6.7	45	56	20	9.1	5.3	5.8
25	5.1	2.6	2.1	4.6	4.0	6.1	32	56	19	14	4.9	5.9
26	5.7	2.7	1.4	4.4	3.8	4.9	27	55	27	18	4.1	5.4
27	4.8	2.5	1.1	4.2	3.6	6.8	22	52	27	19	4.7	4.6
28	4.0	3.1	2.2	4.6	3.3	6.1	22	57	20	19	7.0	4.8
29	1.7	2.7	3.0	4.9	---	5.7	27	66	19	18	7.8	6.8
30	1.8	3.2	3.6	5.3	---	4.6	22	57	24	17	7.2	8.2
31	2.1	---	2.9	5.1	---	3.8	---	59	---	16	7.9	---
TOTAL	164.1	77.5	83.0	130.1	117.9	117.2	662.6	1392	1172	581.5	670.9	212.7
MEAN	5.29	2.58	2.68	4.20	4.21	3.78	22.1	44.9	39.1	18.8	21.6	7.09
MAX	10	3.7	3.6	5.3	4.8	6.8	50	66	61	39	37	14
MIN	1.7	1.2	1.1	2.7	3.3	1.7	4.7	21	19	6.0	4.1	4.6
AC-FT	325	154	165	258	234	232	1310	2760	2320	1150	1330	422

CAL YR 1989 TOTAL 6704.0 MEAN 18.4 MAX 81 MIN 1.1 AC-FT 13300
WTR YR 1990 TOTAL 5381.5 MEAN 14.7 MAX 66 MIN 1.1 AC-FT 10670

09144250 GUNNISON RIVER AT DELTA, CO

LOCATION.--Lat 38°45'01", long 108°04'06", in SE¼NE¼ sec.13, T.15 S., R.96 W., Delta County, Hydrologic Unit 14020005, on left bank near upstream side of U.S. Highway 50 bridge at north edge of Delta.

DRAINAGE AREA.--5,628 mi².

PERIOD OF RECORD.--May 1976 to current year. Gage-height records collected at this site 1912-77 (flood seasons only) are in reports of the National Weather Service.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,919.97 ft, National Weather Service Datum (levels by National Weather Service). Prior to May 1976 nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 15 to Jan. 25 and June 6-8. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, and many diversions for irrigation. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 2,232 ft³/s; 1,617,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft³/s, June 7, 1984, gage height, 13.15 ft; minimum daily, 208 ft³/s, Aug. 11, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height observed, 13.5 ft, June 6, 1957, from National Weather Service wire-weight gage at present datum, (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,670 ft³/s at 1200 May 24, gage height, 4.25 ft; minimum daily, 343 ft³/s, Aug. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	629	649	557	500	513	487	551	682	913	358	439	415
2	634	650	573	510	511	483	542	636	944	345	453	412
3	649	680	575	505	488	485	603	625	845	360	442	426
4	635	715	577	475	492	500	640	617	949	398	421	411
5	628	729	585	490	510	499	642	710	1220	433	404	447
6	800	799	596	495	503	511	608	746	1380	452	385	460
7	845	708	602	500	505	504	535	870	1600	447	373	475
8	840	630	579	515	510	487	555	1050	1450	502	359	493
9	859	626	579	520	498	481	600	952	1350	598	343	513
10	864	623	584	510	503	489	602	858	1320	559	347	512
11	865	609	515	495	507	501	572	829	1440	500	361	482
12	765	604	493	490	487	502	540	812	1350	474	379	481
13	718	597	514	485	484	468	576	726	1180	453	415	527
14	713	592	575	490	538	486	562	702	991	435	412	547
15	727	588	560	485	527	541	545	745	924	426	433	537
16	843	578	540	435	464	476	567	838	827	428	487	528
17	848	586	520	430	460	467	543	792	748	404	514	553
18	816	598	545	420	488	465	528	734	717	385	505	656
19	799	590	540	400	474	501	536	731	655	416	501	722
20	779	592	515	440	480	476	595	765	624	432	466	751
21	795	582	520	460	468	491	628	837	585	418	466	759
22	823	568	525	465	462	488	684	977	556	437	469	778
23	811	594	520	440	459	491	714	1170	517	419	474	781
24	664	608	515	450	468	511	681	1470	474	419	458	777
25	630	612	510	460	479	502	669	1470	468	451	442	562
26	720	598	512	502	480	500	613	1370	522	474	430	547
27	729	584	515	509	489	544	562	1240	430	460	414	710
28	628	562	500	480	489	576	528	1160	403	460	397	773
29	619	543	520	514	---	592	558	1240	399	469	383	741
30	618	540	515	502	---	600	671	1160	385	485	385	613
31	630	---	495	517	---	580	---	977	---	452	391	---
TOTAL	22923	18534	16771	14889	13736	15684	17750	28491	26166	13749	13148	17389
MEAN	739	618	541	480	491	506	592	919	872	444	424	580
MAX	865	799	602	520	538	600	714	1470	1600	598	514	781
MIN	618	540	493	400	459	465	528	617	395	345	343	411
AC-FT	45470	36760	33270	29530	27250	31110	35210	56510	51900	27270	26080	34490

CAL YR 1989 TOTAL 293836 MEAN 805 MAX 2840 MIN 379 AC-FT 582800
WTR YR 1990 TOTAL 219230 MEAN 601 MAX 1600 MIN 343 AC-FT 434800

09146200 UNCOMPAHGRE RIVER NEAR RIDGWAY, CO

LOCATION.--Lat 38°11'02", long 107°44'43", in SW¼NE¼ sec.4, T.45 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 15 ft downstream from bridge, 0.2 mi downstream from Dry Creek, 0.5 mi upstream from Dallas Creek, and 2.3 mi north of Ridgway.

DRAINAGE AREA.--149 mi².

PERIOD OF RECORD.--October 1958 to current year.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,877.58 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Estimated daily discharges: Nov. 29, 30, Dec. 8, 12-14, 17, 19-21, 23-27, Dec. 31 to Jan. 1, 4-7, 16-18, 21-23, 25, 28, 30, Feb. 3, 4, 6, 9, 16. Records good except for estimated daily discharges, which are poor. Diversions for irrigation upstream from station. Water is imported upstream from station in some years by Red Mountain ditch from Mineral Creek in San Juan River basin. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--32 years, 164 ft³/s; 118,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s, June 24, 1983, gage height, 5.73 ft; from rating curve extended above 1,800 ft³/s; minimum daily, 26 ft³/s, Jan. 13, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	0045	*1,110	*4.61	No other peak greater than base discharge.			
Minimum daily, 28 ft ³ /s, Feb. 16-18.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	54	41	38	31	36	50	109	247	247	102	68
2	58	51	41	38	31	35	51	151	219	248	97	68
3	57	53	42	38	30	36	53	181	317	274	90	67
4	74	54	41	38	30	37	53	170	528	289	85	72
5	73	53	42	36	31	38	58	169	689	299	83	74
6	64	53	42	34	30	39	55	204	720	356	81	78
7	62	52	42	32	30	37	59	237	721	298	74	80
8	61	51	42	32	31	38	60	217	719	305	72	81
9	60	51	43	35	30	42	62	184	741	319	74	76
10	58	50	43	34	32	44	62	166	841	265	74	74
11	56	51	41	34	32	49	65	163	902	229	72	71
12	57	51	42	34	33	45	65	133	756	206	74	67
13	58	51	42	35	33	43	65	141	687	189	74	65
14	59	51	42	35	33	41	62	205	622	185	75	63
15	62	47	40	35	29	41	76	227	509	184	81	61
16	82	47	41	34	28	41	92	219	397	170	82	63
17	79	49	42	30	28	41	92	175	366	147	83	69
18	69	48	41	32	28	43	84	196	371	139	84	70
19	64	49	42	34	31	43	133	211	412	143	80	79
20	64	49	42	34	34	47	128	213	381	133	77	72
21	63	49	40	34	33	49	139	260	378	129	86	75
22	63	46	40	34	33	52	139	317	360	126	87	75
23	65	45	40	34	33	54	123	407	355	122	82	74
24	63	47	42	34	34	52	114	440	359	153	80	73
25	60	47	40	32	36	54	110	410	337	159	78	71
26	60	46	40	32	37	51	101	384	311	140	75	77
27	59	45	40	32	38	53	85	361	293	126	74	78
28	59	44	39	30	36	49	76	404	292	121	74	188
29	56	40	39	31	---	51	105	409	280	118	70	171
30	53	40	38	32	---	51	106	273	258	115	69	127
31	53	---	38	32	---	49	---	244	---	106	67	---
TOTAL	1929	1464	1270	1049	895	1381	2523	7580	14368	6040	2456	2427
MEAN	62.2	48.8	41.0	33.8	32.0	44.5	84.1	245	479	195	79.2	80.9
MAX	82	54	43	38	38	54	139	440	902	356	102	188
MIN	53	40	38	30	28	35	50	109	219	106	67	61
AC-FT	3830	2900	2520	2080	1780	2740	5000	15030	28500	11980	4870	4810

CAL YR 1989 TOTAL 39798 MEAN 109 MAX 423 MIN 32 AC-FT 78940
WTR YR 1990 TOTAL 43382 MEAN 119 MAX 902 MIN 28 AC-FT 86050

09147000 DALLAS CREEK NEAR RIDGWAY, CO

LOCATION.--Lat 38°10'40", long 107°45'28", on line between sec.4 and 5, T.4 S N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 25 ft downstream from county bridge, 1.5 mi upstream from mouth, and 1.5 mi northwest of Ridgway.

DRAINAGE AREA.--97.2 mi²

PERIOD OF RECORD.--March 1922 to October 1927, October 1955 to September 1971, October 1979 to current year.

REVISED RECORDS.--WSP 1924: 1960, WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 6,980 ft above National Geodetic Vertical Datum of 1929, from topographic map. Mar. 1, 1922 to Oct. 31, 1927, nonrecording gage at different datum.

REMARKS.--Estimated daily discharges: Nov. 29 to Dec. 5, Dec. 8 to Feb. 19. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 4,500 acres upstream from and 700 acres downstream from station. One small ditch imports water from Leopard Creek (Dolores River basin) to drainage upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--32 years, 40.3 ft³/s; 29,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,120 ft³/s, Aug. 15, 1923, gage height, 4.40 ft, datum then in use, from rating curve extended above 160 ft³/s; maximum gage height, 6.13 ft, July 21, 1983; minimum daily discharge, 0.21 ft³/s, June 19, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 182 ft³/s at 2045 May 3, gage height, 4.25 ft, maximum gage height, 4.51 ft, Jan. 23 (backwater from ice); minimum daily discharge, 0.70 ft³/s, May 17-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	18	14	14	13	17	8.5	12	1.1	10	2.9	17
2	4.9	16	14	14	13	17	7.3	24	1.1	12	2.5	6.7
3	4.6	18	14	14	13	16	5.1	64	1.1	16	2.4	3.9
4	5.9	19	14	14	13	17	3.0	76	.97	25	2.4	3.7
5	7.6	18	15	14	13	17	3.0	59	8.9	32	2.7	3.5
6	6.4	18	15	13	13	16	2.7	39	4.8	59	3.0	3.6
7	7.5	18	15	13	13	16	2.4	25	6.2	45	3.3	3.3
8	8.4	17	15	12	13	17	2.6	14	17	45	4.2	6.6
9	8.1	18	15	13	13	19	3.0	10	24	45	4.9	6.6
10	9.5	18	15	13	14	20	3.3	7.0	44	32	8.9	5.5
11	10	17	15	13	14	20	2.8	4.4	76	24	12	3.2
12	10	17	15	14	14	17	2.4	2.2	58	20	16	2.2
13	8.9	16	15	14	15	15	2.1	.99	45	19	19	2.1
14	8.7	14	14	14	15	13	2.1	1.0	38	15	22	2.2
15	8.7	12	14	14	14	14	2.2	.84	31	16	35	2.3
16	16	16	14	13	13	16	2.2	.86	19	14	34	1.8
17	14	16	15	12	13	17	2.4	.70	13	14	35	1.4
18	15	15	15	12	13	17	2.6	.70	11	13	38	1.3
19	17	15	15	13	15	16	6.5	.70	13	13	36	1.3
20	17	15	15	14	16	16	12	.74	13	8.7	31	1.2
21	18	16	15	14	18	16	12	.91	11	8.6	30	1.2
22	18	14	14	14	17	18	7.5	1.1	15	8.3	33	1.6
23	19	15	14	14	17	18	4.1	1.1	17	5.7	30	1.8
24	18	16	15	14	18	15	3.1	1.1	20	5.8	29	1.9
25	18	16	15	13	18	14	2.7	1.3	24	4.3	28	1.8
26	19	16	15	13	18	12	2.9	1.4	21	3.1	28	6.0
27	19	15	15	13	17	11	2.6	1.4	22	2.8	28	13
28	18	14	15	13	17	12	2.7	1.5	20	2.8	26	25
29	17	14	15	13	---	11	3.4	1.6	12	2.8	24	27
30	16	14	14	13	---	11	4.8	1.4	12	2.8	22	24
31	17	---	14	13	---	9.3	---	1.1	---	2.8	20	---
TOTAL	391.9	481	454	414	413	480.3	124.0	357.04	600.17	527.5	613.2	182.7
MEAN	12.6	16.0	14.6	13.4	14.7	15.5	4.13	11.5	20.0	17.0	19.8	6.09
MAX	19	19	15	14	18	20	12	76	76	59	38	27
MIN	4.6	12	14	12	13	9.3	2.1	.70	.97	2.8	2.4	1.2
AC-FT	777	954	901	821	819	953	246	708	1190	1050	1220	362

CAL YR 1989 TOTAL 6064.4 MEAN 16.6 MAX 63 MIN 1.2 AC-FT 12030
WTR YR 1990 TOTAL 5038.81 MEAN 13.8 MAX 76 MIN .70 AC-FT 9990

09147022 RIDGWAY RESERVOIR NEAR RIDGWAY, CO

LOCATION.--Lat 38°14'14", long 107°45'27", in NW¼SW¼ sec.16, T.46N., R.8 W., Ouray County, Hydrologic Unit 14020006, in concrete gate house at base of Ridgway Reservoir on Uncompagre River, 0.5 mi upstream from Fisher Creek, and 5.3 mi north of Ridgway.

DRAINAGE AREA.--265 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings published are to datum.

REMARKS.--Reservoir is formed by an earthfill dam. Dam completed March 22, 1988. Capacity 84,590 acre-ft between 6,680.0 ft, streambed at dam axis and 6,871.3 ft, maximum water surface. Dead storage below elevation 6,720.0 ft, 1,430 acre-ft. Figures given are live contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 84,900 acre-ft, June 11, 1990, elevation, 6,872.93 ft; minimum contents, 61,050 acre-ft, Oct. 1, 1988, elevation, 6,848.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 84,900 acre-ft, June 11, elevation, 6,872.93 ft; minimum contents, 66,930 acre-ft, Sept. 16, elevation, 6,854.97 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400 WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	*6,861.46	73,140	-
Oct. 31.	6,862.53	74,190	+1,050
Nov. 30.	6,863.66	75,310	+1,120
Dec. 31.	6,864.16	75,810	+500
CAL YR 1989	-	-	+13,550
Jan. 31.	6,864.40	76,040	+230
Feb. 28.	6,864.84	76,480	+440
Mar. 31.	6,866.03	77,680	+1,200
Apr. 30.	6,869.24	80,980	+3,300
May 31.	6,871.94	83,840	+2,860
June 30.	6,871.78	83,670	-170
July 31.	6,864.95	76,590	-7,080
Aug. 31.	6,856.18	68,060	-8,530
Sept. 30.	6,856.08	67,970	-90
WTR YR 1990	-	-	-5,130

* Provided by USGS, readings at 2400 hrs.

LOCATION.--Lat 38°14'17", long 107°45'31", in NE¼SE¼ sec.17, T.46 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 1,600 ft upstream from Fisher Creek, 800 ft downstream from Ridgway Reservoir gate house, and 5.4 mi north of Ridgway.

PERIOD OF RECORD.--October 1988 to current year.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation by means of numerous canals downstream from station. Flow regulated by Ridgway Reservoir, capacity 84,591 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s, June 13, 1990, gage height, 3.56 ft; minimum daily, 34 ft³/s, Apr. 21-24, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft³/s at 1400 June 13, gage height, 3.56 ft; minimum daily, 34 ft³/s, Apr. 21-24.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	49	41	44	40	41	38	36	276	319	364	199
2	87	47	41	44	40	40	38	36	249	361	362	200
3	58	47	41	44	40	40	38	54	255	381	355	201
4	60	45	41	44	40	40	37	132	351	381	340	170
5	57	41	41	43	40	40	36	143	525	380	340	137
6	56	42	41	43	40	40	36	113	683	378	333	116
7	58	43	41	43	40	40	36	114	718	365	318	99
8	58	45	41	43	40	40	38	96	812	371	320	82
9	59	44	41	43	40	40	38	90	790	348	323	82
10	67	44	43	43	40	40	38	127	806	337	338	84
11	75	44	43	43	40	39	39	140	909	319	349	86
12	70	45	44	43	40	39	39	135	911	311	347	86
13	66	43	42	43	41	39	38	122	835	307	338	90
14	65	44	41	43	41	39	38	150	751	308	319	90
15	62	43	41	43	41	39	38	174	715	298	274	90
16	64	41	41	43	41	39	38	183	707	309	204	89
17	62	41	41	43	40	39	39	189	572	320	177	86
18	61	41	41	43	40	39	39	202	406	340	179	83
19	60	41	41	43	40	39	39	218	390	354	177	81
20	58	41	42	40	41	39	37	232	410	355	193	82
21	57	41	43	40	41	39	34	232	412	355	200	81
22	57	41	41	40	41	39	34	265	410	355	191	81
23	54	42	41	40	41	39	34	318	393	356	161	81
24	53	43	41	40	41	39	34	393	387	355	143	82
25	50	43	41	41	41	39	35	401	388	359	138	81
26	52	43	42	41	41	39	35	392	373	359	138	82
27	52	43	44	40	41	39	35	375	365	358	137	79
28	54	43	44	40	41	39	35	373	372	360	134	79
29	51	43	44	40	---	38	35	411	372	361	158	77
30	52	41	44	40	---	38	35	377	348	362	188	78
31	42	---	44	40	---	38	---	308	---	363	196	---
TOTAL	1875	1294	1298	1303	1133	1217	1103	6531	15891	10785	7734	3034
MEAN	60.5	43.1	41.9	42.0	40.5	39.3	36.8	211	530	348	249	101
MAX	98	49	44	44	41	41	39	411	911	381	364	201
MIN	42	41	41	40	40	38	34	36	249	298	134	77
AC-FT	3720	2570	2570	2580	2250	2410	2190	12950	31520	21390	15340	6020
CAL YR 1989	TOTAL	39631	MEAN 109	MAX 292	MIN 40	AC-FT 78610						
WTR YR 1990	TOTAL	53198	MEAN 146	MAX 911	MIN 34	AC-FT 105500						

09147500 UNCOMPAHGRE RIVER AT COLONA, CO

LOCATION.--Lat 38°19'53", long 107°46'44", in NW¼NW¼ sec.17, T.47 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 75 ft downstream from county highway crossing, 0.2 mi north of Colona, and 1.0 mi upstream from Beaton Creek.

DRAINAGE AREA.--448 mi².

PERIOD OF RECORD.--April 1903 to November 1905, April to June 1906 (gage heights and discharge measurements only), October 1912 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Colona" 1904-6, 1922-34.

REVISED RECORDS.--WSP 1313: 1904. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,318.80 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Sept. 30, 1949.

REMARKS.--Estimated daily discharges: Dec. 23-27, 31, Jan. 1, 4-7, 16-19, 22, 23, 25, 26, and Feb. 16-17. Records good. Flow regulated by Ridgway Reservoir, 7.7 mi upstream since 1986, total capacity, 84,590 acre-ft. Diversions upstream from station for irrigation of about 2,600 acres downstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--76 years (water years 1904-5, 1913-86), 271 ft³/s; 196,300 acre-ft/yr, prior to completion of Ridgway Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,080 ft³/s, June 13, 14, 1921; minimum daily, 12 ft³/s, Sept. 19, 1956, May 7, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,740 ft³/s at 0115 June 11, gage height, 4.48 ft; minimum daily, 25 ft³/s, Apr. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	54	49	54	47	55	56	47	291	313	310	159
2	30	50	49	55	47	54	59	66	253	336	314	157
3	30	51	49	54	54	53	59	108	283	365	305	156
4	33	53	50	54	54	53	59	190	511	360	286	134
5	35	56	51	54	51	52	61	210	834	356	281	104
6	37	58	53	52	53	55	55	209	1050	364	278	84
7	37	58	53	52	49	51	59	235	1100	338	268	68
8	35	55	54	53	49	53	61	204	1210	344	266	52
9	33	54	53	53	55	60	60	172	1270	329	268	46
10	35	53	51	53	51	60	56	175	1360	308	278	44
11	41	49	51	52	52	59	65	182	1530	291	292	43
12	42	47	55	53	51	59	63	145	1400	278	294	43
13	41	49	60	53	50	56	59	134	1220	273	290	43
14	39	49	58	52	49	54	56	178	1010	277	277	42
15	39	47	53	51	48	54	76	237	815	271	261	41
16	51	45	53	51	48	52	77	244	626	278	222	40
17	46	48	56	51	48	53	63	221	533	288	190	44
18	53	48	53	50	49	57	44	218	470	308	184	41
19	52	49	57	50	50	54	76	228	491	326	174	41
20	59	50	56	49	49	60	83	231	486	322	175	44
21	59	50	55	54	50	64	108	251	488	321	189	45
22	64	48	53	49	51	68	119	322	466	318	185	45
23	71	48	52	49	51	74	99	436	450	320	157	43
24	78	50	50	48	53	68	71	573	445	321	136	42
25	77	51	50	49	54	70	55	566	436	322	126	46
26	79	49	50	50	54	64	42	506	398	323	124	44
27	77	48	52	50	55	65	30	441	379	326	124	42
28	79	46	55	54	55	58	25	451	390	328	120	61
29	77	46	54	48	---	57	37	491	375	324	128	77
30	74	48	55	50	---	57	44	376	342	314	154	76
31	66	---	52	47	---	55	---	308	---	309	163	---
TOTAL	1599	1507	1642	1594	1427	1804	1877	8355	20912	9851	6819	1947
MEAN	51.6	50.2	53.0	51.4	51.0	58.2	62.6	270	697	318	220	64.9
MAX	79	58	60	55	55	74	119	573	1530	365	314	159
MIN	30	45	49	47	47	51	25	47	253	271	120	40
AC-FT	3170	2990	3260	3160	2830	3580	3720	16570	41480	19540	13530	3860

CAL YR 1989 TOTAL 43418 MEAN 119 MAX 328 MIN 28 AC-FT 86120
WTR YR 1990 TOTAL 59334 MEAN 163 MAX 1530 MIN 25 AC-FT 117700

09149500 UNCOMPAHGRE RIVER AT DELTA, CO

LOCATION.--Lat 38°44'31", long 108°04'49", in SW¼SW¼ sec.13, T.15 S., R.96 W., Delta County, Hydrologic Unit 14020006, on right bank 525 ft downstream from 5th Street Bridge at west edge of Delta and 1.1 mi upstream from mouth.

DRAINAGE AREA.--1,115 mi².

PERIOD OF RECORD.--April 1903 to October 1931 (no winter records in most years), September 1938 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Delta" 1907-24.

REVISED RECORDS.--WSP 1243: 1904. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,926.49 ft above National Geodetic Vertical Datum of 1929. Feb. 18, 1960, to Mar. 26, 1963, water-stage recorder at site 750 ft upstream at datum 3.43 ft, higher. Mar. 27, 1963, to May 12, 1965, water-stage recorder at site 1,050 ft upstream at datum 6.08 ft, higher. See WSP 1733 or 1924 for history of changes prior to Feb. 18, 1960.

REMARKS.--Estimated daily discharges: Dec. 15-24. Records good. Natural flow of stream affected by water diverted from Gunnison River (see record of diversion through Gunnison tunnel published with station 09128000) and other adjacent basins, diversions for irrigation of about 90,000 acres above station, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--54 years (water years 1908, 1921, 1939-90), 293 ft³/s; 212,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 5,800 ft³/s, May 15, 1984, gage height, 8.85 ft, from rating curve extended above 3,400 ft³/s; no flow at times in 1908; minimum daily determined since beginning of diversion through Gunnison tunnel, 7.0 ft³/s, July 10-15, 17, 21, 24-28, 1910.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,020 ft³/s at 1300 June 6, gage height, 4.45 ft; minimum daily, 55 ft³/s, Mar. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	279	131	109	102	72	117	564	197	126	189	223
2	240	255	125	116	99	77	117	502	200	134	208	236
3	264	266	121	121	90	81	110	523	195	141	208	246
4	305	266	125	102	92	86	135	575	290	195	183	250
5	381	267	125	114	104	78	213	325	554	180	187	257
6	391	259	129	111	95	79	191	209	748	196	182	253
7	371	208	127	118	95	82	223	181	818	187	168	238
8	377	162	118	112	101	80	203	183	562	229	166	231
9	362	172	116	118	91	79	200	187	487	498	163	244
10	349	170	115	117	91	82	157	161	547	379	152	254
11	377	166	99	119	93	81	135	149	773	292	165	249
12	287	165	99	120	94	80	133	156	767	231	190	263
13	281	160	107	120	98	98	130	153	611	211	203	237
14	298	154	107	116	94	84	112	141	434	194	213	230
15	304	141	102	116	83	79	102	179	316	193	225	221
16	413	141	100	113	78	66	107	210	201	192	302	227
17	536	142	106	117	89	59	102	202	286	184	296	281
18	490	142	104	98	96	55	90	167	261	193	257	354
19	486	139	102	92	89	134	289	160	182	247	229	412
20	433	139	108	112	91	386	228	155	167	233	205	335
21	411	139	111	101	86	410	202	167	164	230	192	342
22	402	127	115	98	85	371	198	173	165	223	191	316
23	427	132	110	103	81	330	179	207	150	207	199	292
24	427	130	120	104	74	255	148	331	439	226	191	317
25	385	130	123	90	75	210	148	427	268	288	169	311
26	377	131	125	92	76	168	146	392	153	280	173	284
27	414	130	122	94	79	106	157	317	147	218	187	258
28	441	122	125	88	77	123	126	303	139	201	178	268
29	371	112	127	89	---	135	194	330	133	202	184	288
30	361	123	122	98	---	164	381	333	128	210	181	272
31	349	---	111	101	---	147	---	229	---	190	196	---
TOTAL	11545	5069	3577	3319	2498	4337	4973	8291	10482	6910	6132	8189
MEAN	372	169	115	107	89.2	140	166	267	349	223	198	273
MAX	536	279	131	121	104	410	381	575	818	498	302	412
MIN	235	112	99	88	74	55	90	141	128	126	152	221
AC-FT	22900	10050	7090	6580	4950	8600	9860	16450	20790	13710	12160	16240

CAL YR 1989 TOTAL 66827 MEAN 183 MAX 536 MIN 65 AC-FT 132600
WTR YR 1990 TOTAL 75322 MEAN 206 MAX 818 MIN 55 AC-FT 149400

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO

LOCATION.--Lat 38°59'00", long 108°27'00", in NE¼SW¼ of sec.14, T.2 S., R.1 E., Ute Meridian, Mesa County, Hydrologic Unit 14020005, on right bank 180 ft upstream from bridge on State Highway 141, 0.4 mi downstream from Whitewater Creek, 0.5 mi south of Whitewater, and 8 mi southeast of Grand Junction.

DRAINAGE AREA.--7,928 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to December 1895 (gage heights only), October 1896 to September 1899, October 1901 to October 1906, October 1916 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Whitewater" 1901-6.

REVISED RECORDS.--WSP 509: Drainage area at former site. WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,628.12 ft above National Geodetic Vertical Datum of 1929. See WSP 1733 or 1924 for history of changes prior to October 1959.

REMARKS.--Estimated daily discharges: Dec. 22-26, Jan. 10-13, and March 13-27. Records good except for estimated daily discharges, which are fair. Records show flow that enters Colorado River from Gunnison River basin except for about 60 ft³/s diverted downstream from gage during irrigation season. Natural flow of river affected by diversions for irrigation of about 233,000 acres upstream from station, storage reservoirs, and return flow from irrigated lands.

AVERAGE DISCHARGE.--82 years (water years 1897-99, 1902-06, 1917-90), 2,585 ft³/s; 1,873,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 35,700 ft³/s, May 23, 1920, gage height, 14.95 ft, site and datum then in use, from rating curve extended above 22,000 ft³/s; minimum daily, 106 ft³/s, July 20, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,870 ft³/s at 2230 June 6, gage height, 4.52 ft; minimum daily, 606 ft³/s, Feb. 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1899 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	1210	900	859	737	627	788	1650	1520	658	837	777
2	1130	1170	947	862	729	620	715	1730	1580	629	864	847
3	1140	1180	981	879	694	625	675	1600	1480	638	900	889
4	1160	1250	1000	890	656	635	774	1650	1390	766	862	923
5	1200	1270	1010	746	692	659	903	1660	1850	881	811	945
6	1240	1290	1030	829	701	659	987	1500	2420	892	781	998
7	1610	1340	1080	804	699	687	907	1570	2590	939	722	974
8	1490	955	1060	866	715	655	834	1800	2400	962	696	997
9	1520	934	1030	877	699	632	932	1880	2240	1300	683	1010
10	1530	922	1020	920	651	630	975	1670	2230	1450	648	1060
11	1530	920	977	900	663	643	923	1490	2480	1180	647	1070
12	1480	917	736	860	677	652	896	1490	2530	1050	701	1030
13	1290	910	695	880	652	660	867	1410	2360	942	777	1050
14	1280	901	845	882	687	680	893	1310	1960	884	852	1100
15	1310	890	1000	825	775	720	847	1270	1660	855	835	1100
16	1440	897	951	794	645	700	846	1480	1470	830	951	1100
17	1670	906	929	701	652	690	875	1530	1290	840	1070	1230
18	1570	937	920	712	665	700	874	1370	1340	806	1040	1410
19	1550	950	934	763	660	740	892	1270	1140	861	1000	1620
20	1530	953	901	840	646	700	1260	1250	1060	917	977	1610
21	1530	979	891	767	642	710	1150	1300	1000	921	959	1590
22	1540	989	940	732	632	720	1270	1440	958	894	918	1610
23	1550	975	920	719	613	780	1320	1710	924	925	954	1550
24	1520	965	910	795	606	760	1320	2040	942	906	966	1550
25	1260	917	920	662	606	760	1320	2380	1170	953	910	1490
26	1270	939	920	724	615	740	1210	2260	915	1100	854	1270
27	1410	960	918	767	623	760	1120	2130	881	982	844	1380
28	1370	953	893	712	631	781	1020	1960	727	926	794	1440
29	1220	911	880	794	---	807	957	1930	682	902	749	1670
30	1180	885	889	807	---	880	1400	2100	700	934	726	1430
31	1200	---	905	739	---	893	---	1760	---	912	725	---
TOTAL	42830	30175	28932	24907	18663	21905	29750	51590	45889	28635	26053	36720
MEAN	1382	1006	933	803	667	707	992	1664	1530	924	840	1224
MAX	1670	1340	1080	920	775	893	1400	2380	2590	1450	1070	1670
MIN	1110	885	695	662	606	620	675	1250	682	629	647	777
AC-FT	84950	59850	57390	49400	37020	43450	59010	102300	91020	56800	51680	72830

CAL YR 1899 TOTAL 467769 MEAN 1282 MAX 3620 MIN 627 AC-FT 927800
WTR YR 1990 TOTAL 386049 MEAN 1058 MAX 2590 MIN 606 AC-FT 765700

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued
(Irrigation network station)
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1931 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1935 to September 1974, September 1975 to current year.

WATER TEMPERATURES: April 1949 to September 1974, September 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1975

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 3,000 microsiemens several days during July and September 1974; minimum, 194 microsiemens June 6, 1979.

WATER TEMPERATURE: Maximum, 30.0°C Aug. 13, 1958; minimum, 0.0°C on many days during winter months most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,600 microsiemens July 18; minimum recorded, 707 microsiemens May 9.

WATER TEMPERATURES: Maximum, 26.8°C July 1; minimum, 0.0°C on many days in winter.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV										
07...	1000	1390	1220	8.3	7.5	9.0	10.8	K10	--	K72
FEB										
13...	1230	658	1170	8.2	4.0	8.5	10.0	<5	<5	52
MAR										
27...	1315	766	977	8.1	11.5	28	9.7	K43	K38	52
MAY										
02...	1000	1740	1110	8.2	8.5	130	9.6	710	670	K830
AUG										
08...	1240	678	1420	8.1	21.0	27	8.5	K100	K120	K7
28...	1245	780	1440	8.2	19.5	16	8.2	K54	K66	K50

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT MG/L AS CACO3	BICAR- BONATE WATER DIS IT MG/L AS HCO3	CAR- BONATE WATER DIS IT MG/L AS CO3
NOV									
07...	510	130	44	77	1	4.0	164	181	10
FEB									
13...	500	120	48	85	2	4.2	146	159	10
MAR									
27...	380	95	35	65	1	3.8	150	183	0
MAY									
02...	420	110	35	69	1	3.3	193	236	0
AUG									
08...	600	160	48	89	2	4.6	160	195	0
28...	640	170	51	95	2	4.2	161	196	0

K Based on non-ideal colony count.

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

		SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	
	NOV 07...	510	8.3	0.5	10	926	889	1.26	3480	--	
	FEB 13...	490	12	0.3	8.7	942	861	1.28	1670	--	
	MAR 27...	340	11	0.3	13	702	658	0.95	1450	0.79	
	MAY 02...	390	8.6	0.3	14	796	753	1.08	3740	1.19	
	AUG 08...	540	12	0.7	9.9	1060	969	1.44	1940	--	
	28...	650	12	0.6	12	1120	1100	1.52	2360	--	
DATE		NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	
	NOV 07...	<0.01	1.10	0.03	0.02	0.87	0.9	0.03	0.03	0.02	
	FEB 13...	--	1.00	0.02	0.04	0.38	0.4	0.03	0.02	<0.01	
	MAR 27...	0.01	0.80	0.10	0.09	0.5	0.6	0.06	<0.01	<0.01	
	MAY 02...	0.01	1.20	0.05	0.06	0.55	0.6	0.10	0.02	0.01	
	AUG 08...	<0.01	2.00	0.04	0.04	0.56	0.6	0.07	0.02	<0.01	
	28...	<0.01	1.80	0.01	0.02	0.59	0.6	0.06	<0.01	<0.01	
DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 07...	1000	50	1	46	<0.5	<1	<1	<3	3	38	<1
MAR 27...	1315	30	2	45	0.6	1	<5	<3	<10	13	<10
MAY 02...	1000	<10	1	62	<0.5	<1	1	<3	3	15	<1
AUG 28...	1245	20	1	49	<0.5	1.0	<1	<3	2	14	<1
DATE		LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 07...		75	23	<0.1	10	3	9	<1.0	1400	<6	13
MAR 27...		56	48	<0.1	10	10	7	<1.0	950	<6	17
MAY 02...		63	20	<0.1	<10	2	8	<1.0	1200	<6	16
AUG 28...		96	16	0.1	<10	2	10	<1.0	1900	<6	6

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 17...	1105	1740	1250	11.5	JUN 14...	1120	1840	880	17.0
JAN 16...	1300	878	1230	0.0	JUL 16...	1005	823	1360	22.0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 07...	1000	1390	54	203
FEB 13...	1230	658	53	93
MAR 27...	1315	766	107	221
MAY 02...	1000	1740	472	2220
AUG 08...	1240	678	109	208
28...	1245	780	104	220

GUNNISON RIVER BASIN

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	1230	1320	1230	1240	1190	1030	1040	904	1080	1340	1370
2	1210	1230	1320	1210	1230	1190	1030	1020	913	1230	1350	1380
3	1210	1250	1310	1200	1230	1170	982	1010	900	1330	1390	1290
4	1220	1250	1290	1240	1230	1190	963	970	931	1360	1390	1260
5	1210	1220	1280	1270	1190	1180	921	904	929	1370	1370	1260
6	1230	1220	1270	1240	1200	1220	907	867	837	1360	1390	1300
7	1200	1210	1250	1250	1230	1230	900	841	782	1350	1380	1350
8	1040	1190	1290	1250	1220	1270	911	794	756	1300	1390	1350
9	1070	1310	1340	1250	1220	1270	924	727	771	1320	1390	1350
10	1060	1360	1340	1210	1220	1240	960	725	795	1320	1420	1380
11	1070	1380	1400	1170	1200	1220	1000	750	827	1330	1400	1420
12	1090	1390	1490	1180	1200	1220	1020	759	826	1310	1390	1430
13	1110	1390	1510	1180	1180	1200	1040	773	845	1310	1390	1440
14	1140	1390	1490	1190	1210	1210	1020	813	867	1340	1380	1430
15	1160	1390	1480	1190	1220	1200	1000	852	872	1340	1400	1430
16	1190	1380	1470	1200	1150	1140	1020	856	887	1390	1390	1420
17	1260	1370	1420	1230	1130	1110	1050	835	912	1430	1420	1410
18	1300	1370	1340	1260	1190	1170	1060	846	944	1490	1460	1400
19	1260	1360	1320	1260	1260	1170	1040	881	948	1420	1460	1400
20	1220	1350	1290	1190	1230	1160	1080	898	952	1430	1420	1410
21	1210	1340	1250	1190	1180	1130	1150	907	947	1420	1450	1410
22	1210	1340	1240	1220	1210	1030	1150	919	961	1400	1450	1390
23	1170	1350	1250	1230	1200	983	1080	927	972	1380	1450	1380
24	1140	1350	1240	1230	1190	967	1030	928	985	1370	1450	1370
25	1140	1340	1220	1260	1180	967	991	911	987	1350	1450	1360
26	1200	1350	1220	1300	1170	957	980	864	966	1390	1450	1390
27	1190	1340	1230	1350	1180	935	991	849	994	1400	1450	1440
28	1150	1330	1240	1320	1180	940	1040	861	975	1380	1440	1450
29	1180	1330	1240	1220	---	939	1060	861	1040	1350	1430	1450
30	1230	1320	1240	1190	---	912	1050	859	1070	1360	1420	1440
31	1230	---	1220	1240	---	941	---	869	---	1340	1350	---
MEAN	1180	1320	1320	1230	1200	1120	1010	868	910	1350	1410	1390

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO--Continued

WATER TEMPERATURE (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	14.8	5.8	4.1	1.5	.1	.3	.0	3.5	1.4	8.8	6.2
2	16.4	13.6	6.0	3.4	1.5	.1	.2	.0	4.0	1.9	9.4	5.7
3	16.3	13.2	5.8	3.7	1.5	.0	.0	.0	2.8	.9	7.9	6.9
4	15.4	13.6	5.9	4.0	1.8	.2	.0	.0	2.4	.3	9.1	6.6
5	15.5	12.9	6.7	4.3	2.2	.5	.1	.0	2.6	.4	8.8	6.9
6	14.5	12.0	8.4	6.3	3.4	1.9	.1	.0	2.5	.6	7.0	5.9
7	14.9	11.7	8.4	7.1	4.0	2.4	.0	.0	4.0	1.6	7.8	5.0
8	14.6	11.7	7.4	5.8	3.1	2.0	.0	.0	3.9	1.8	9.7	5.5
9	14.3	11.3	7.3	5.6	2.0	1.2	.1	.0	3.8	1.6	10.1	7.6
10	14.4	11.4	7.6	5.5	1.4	.4	.1	.0	4.3	2.1	11.8	9.0
11	14.7	11.5	8.1	5.9	.8	.2	.1	.0	5.2	2.5	11.5	9.0
12	14.6	11.6	8.5	6.3	1.2	.3	.1	.0	5.3	3.4	9.7	7.7
13	14.1	11.6	8.5	6.5	.8	.4	.0	.0	7.1	4.1	7.6	4.9
14	14.4	12.3	8.1	6.1	.7	.0	.3	.0	4.3	2.1	6.8	3.2
15	14.9	12.9	6.4	4.6	.2	.0	.3	.0	2.7	.0	7.3	4.7
16	14.4	12.8	5.4	3.7	.1	.0	.5	.0	1.2	.0	9.0	4.7
17	13.4	11.3	4.6	3.2	.3	.0	1.1	.3	1.4	.0	8.3	5.6
18	12.1	9.8	4.6	2.9	.5	.0	.9	.4	4.5	1.2	9.6	6.4
19	11.5	8.9	4.8	2.8	.4	.0	.4	.0	4.7	2.8	11.6	6.6
20	10.7	8.4	5.5	3.4	.1	.0	1.1	.0	5.5	3.3	11.2	8.9
21	11.2	9.0	6.1	4.1	.3	.0	1.4	.1	5.0	2.7	13.1	10.0
22	12.7	10.4	6.2	4.3	.3	.0	.8	.1	5.7	2.5	12.4	10.2
23	13.3	11.1	5.9	4.4	.4	.0	1.1	.1	6.4	3.0	13.7	11.2
24	13.4	10.7	4.9	4.6	.3	.0	.9	.1	6.9	3.7	13.6	10.6
25	12.8	10.9	5.9	4.5	.4	.0	.3	.1	7.3	4.7	12.7	10.3
26	11.7	9.9	6.8	5.1	.3	.0	.4	.0	7.9	4.9	12.9	10.1
27	9.9	7.9	6.1	4.6	.2	.0	.5	.1	8.8	5.9	12.8	11.0
28	9.3	7.2	4.4	2.4	.0	.0	.6	.1	9.3	6.0	13.1	10.9
29	7.9	5.6	2.8	1.3	.3	.0	.9	.0	---	---	11.5	10.1
30	6.7	4.2	2.0	.3	.1	.0	.6	.0	---	---	10.6	9.4
31	6.6	4.4	---	---	.3	.0	2.0	.3	---	---	12.6	8.5
MONTH	17.5	4.2	8.5	.3	4.0	.0	2.0	.0	9.3	.0	13.7	3.2
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.3	10.3	9.3	7.1	16.3	14.1	26.8	22.8	21.6	19.4	21.9	20.7
2	15.2	11.7	11.8	7.9	16.0	12.1	25.5	22.9	21.4	19.2	23.1	20.6
3	15.5	12.5	14.0	9.7	18.9	12.9	24.4	22.2	22.9	18.9	23.2	20.1
4	15.4	13.1	15.1	11.5	20.8	16.1	24.7	21.6	23.2	19.8	23.4	21.0
5	15.9	12.9	16.7	12.2	21.5	17.7	23.8	21.3	23.5	20.0	23.3	21.3
6	14.8	11.8	18.1	13.2	20.4	17.5	23.4	20.2	23.7	20.1	22.4	20.1
7	13.3	11.8	16.9	14.1	20.2	17.0	23.4	21.1	23.8	20.3	22.4	18.8
8	12.6	11.6	16.1	12.9	21.2	17.3	22.7	21.3	24.6	20.9	22.6	19.5
9	13.2	11.5	14.2	10.6	20.7	18.1	23.9	20.5	25.1	21.0	21.1	19.0
10	14.2	10.3	15.0	10.7	19.2	17.2	24.7	20.9	24.3	21.4	21.4	18.3
11	14.6	11.3	14.9	12.6	19.4	16.3	25.7	21.5	23.3	20.7	21.7	18.3
12	15.4	12.7	15.5	12.4	19.4	16.5	25.7	21.8	23.9	21.1	21.3	18.3
13	15.5	12.7	16.1	12.7	19.9	17.0	24.4	22.3	22.2	20.4	21.3	18.1
14	15.4	12.1	17.3	13.8	20.6	16.9	24.9	22.1	22.7	19.8	21.2	18.3
15	16.5	13.1	16.1	14.4	20.4	17.4	25.0	21.7	22.1	19.9	21.0	18.4
16	16.8	14.1	16.4	12.5	20.6	17.0	24.7	21.6	21.0	19.9	20.5	18.8
17	15.6	13.9	17.6	13.4	20.6	16.9	24.5	21.1	22.3	19.8	18.9	16.9
18	14.5	12.8	17.3	13.9	21.7	17.4	22.9	21.2	21.4	19.1	17.4	15.4
19	15.8	12.2	16.7	13.6	21.6	18.3	23.9	20.3	21.6	18.9	16.5	13.6
20	16.0	12.7	17.2	13.5	22.1	18.0	25.0	21.6	20.9	19.0	15.7	14.3
21	16.4	13.6	18.6	14.1	23.0	19.1	24.0	21.5	22.3	18.6	16.2	13.2
22	17.0	14.2	19.7	15.8	23.3	19.7	23.8	20.2	21.4	19.3	18.2	14.4
23	16.4	14.7	19.7	16.2	24.1	20.2	22.7	20.3	21.9	19.0	17.2	15.9
24	15.0	13.5	19.3	15.9	25.2	21.1	21.2	19.5	21.2	18.1	18.1	15.4
25	13.4	12.2	17.6	14.9	23.7	21.3	22.8	19.2	21.4	18.3	18.3	15.8
26	13.6	10.8	16.2	14.4	24.6	21.4	23.5	20.0	21.7	18.4	19.2	16.2
27	12.8	9.9	17.3	13.7	24.8	21.7	24.2	20.4	22.2	18.6	18.7	17.0
28	13.9	10.8	17.0	14.7	26.0	21.9	23.7	21.1	22.9	19.2	17.4	15.7
29	12.4	9.3	16.2	14.5	25.7	22.2	23.4	20.4	23.7	20.1	17.3	14.6
30	9.0	7.6	15.7	13.9	26.4	22.4	22.8	19.7	23.4	20.5	17.4	14.4
31	---	---	16.8	13.7	---	---	22.7	20.0	23.5	21.4	---	---
MONTH	17.0	7.6	19.7	7.1	26.4	12.1	26.8	19.2	25.1	18.1	23.4	13.2

09153290 REED WASH NEAR MACK, CO

LOCATION.--Lat 39°12'41", long 108°48'11", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.2 N., R.3 W., Ute Meridian, Mesa County, Hydrologic Unit 14010005, on right bank 250 ft upstream from unnamed tributary, 0.4 mi downstream from Peck and Beede Wash, and 3.5 mi east of Mack.

DRAINAGE AREA.--15.7 mi².

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,505 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow is mostly return flow and waste water from irrigated lands under Government Highline and Grand Valley Canals. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years, 47.2 ft³/s; 34,200 acre-ft/yr. The figures published in the 1987, and 1988 reports are in error; the correct figures are: 12 years, 48.4 ft³/s; 35,070 acre-ft/yr, and 13 years, 48.0 ft³/s; 34,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 390 ft³/s, July 23, 1983, gage height, unknown, maximum recorded gage height, 6.09 ft, July 24, 1979; minimum daily discharge, 2.0 ft³/s, Jan. 31, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 117 ft³/s at 2300 Sept. 18, gage height, 4.49 ft; minimum daily, 3.2 ft³/s, Mar. 24-27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	78	9.1	5.7	4.8	3.6	91	59	68	67	67	71
2	67	88	9.0	5.7	4.8	3.6	75	68	69	73	73	70
3	72	88	9.0	5.7	4.6	3.6	53	62	61	75	70	66
4	68	79	8.8	5.6	4.6	3.6	79	53	63	71	71	61
5	67	75	8.3	5.6	4.7	3.6	79	56	65	75	75	59
6	72	70	8.2	5.6	4.6	3.6	89	61	67	81	80	62
7	67	24	7.8	5.6	4.5	3.5	62	56	59	81	73	68
8	62	15	7.7	5.6	4.5	3.5	69	53	55	88	67	67
9	62	15	7.6	5.6	4.5	3.5	79	51	66	67	62	64
10	67	13	7.7	5.6	4.5	3.5	67	52	80	59	65	61
11	71	12	7.6	5.6	4.5	3.5	55	52	81	64	60	68
12	77	12	7.5	5.6	4.5	3.5	46	50	73	72	65	68
13	77	11	7.3	5.5	4.5	3.5	49	50	60	72	66	75
14	77	11	7.2	5.4	4.4	3.4	43	50	54	64	63	76
15	83	11	7.0	5.4	4.3	3.4	38	49	54	60	61	71
16	78	11	7.0	5.3	4.2	3.4	41	56	60	57	60	68
17	77	11	7.0	5.3	4.2	3.4	26	56	63	59	67	67
18	85	11	6.8	5.1	4.2	3.3	28	61	64	62	70	75
19	88	11	6.6	5.1	4.2	3.3	27	60	55	70	79	71
20	85	11	6.6	5.1	4.1	3.3	22	66	61	66	77	55
21	77	11	6.7	5.1	4.1	3.3	24	64	67	67	67	62
22	76	10	6.5	5.0	4.1	3.3	29	57	73	72	63	65
23	81	10	6.3	5.0	4.1	3.3	36	61	67	67	64	59
24	78	10	6.2	5.0	3.9	3.2	49	59	69	65	69	59
25	73	10	6.2	4.8	3.9	3.2	45	59	67	71	65	59
26	77	10	6.2	4.9	3.9	3.2	47	61	69	72	68	59
27	82	9.8	6.2	4.9	3.9	3.2	53	64	67	75	66	52
28	82	9.8	6.2	4.7	3.7	27	49	61	65	73	59	56
29	78	9.5	6.1	4.8	---	89	55	53	61	73	62	57
30	83	9.4	6.0	4.8	---	90	52	53	65	66	69	59
31	82	---	5.8	4.8	---	89	---	56	---	61	75	---
TOTAL	2337	756.5	222.2	163.5	120.8	387.3	1567	1769	1948	2145	2098	1930
MEAN	75.4	25.2	7.17	5.27	4.31	12.5	52.2	57.1	64.9	69.2	67.7	64.3
MAX	88	88	9.1	5.7	4.8	90	91	68	81	88	80	76
MIN	62	9.4	5.8	4.7	3.7	3.2	22	49	54	57	59	52
AC-FT	4640	1500	441	324	240	768	3110	3510	3860	4250	4160	3830

CAL YR 1989 TOTAL 14785.3 MEAN 40.5 MAX 90 MIN 3.1 AC-FT 29330
WTR YR 1990 TOTAL 15444.3 MEAN 42.3 MAX 91 MIN 3.2 AC-FT 30630

LOCATION.--Lat 39°07'45", long 109°01'36", in SE¼NW¼ sec.5, T.11 S., R.104 W., Mesa County, Hydrologic Unit 14010005, on right bank 0.7 mi downstream from McDonald Creek, 12 mi southwest of Mack, Colo., and 1.5 mi upstream from Colorado-Utah State line.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WRD Colo. 1974: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,325 ft above National Geodetic Vertical Datum of 1929, from topographic map. May 1951, to October 1979, water-stage recorder at site 5.7 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 27 to Jan. 13. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation. (Records include all return flow from irrigated areas).

AVERAGE DISCHARGE.--39 years, 6,217 ft³/s; 4,504,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,800 ft³/s, May 27, 1984, gage height, 16.12 ft, (from highwater mark); minimum daily, 960 ft³/s, Sept. 7, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,600 ft³/s at 0700 June 12, gage height, 5.18 ft; minimum daily, 1,800 ft³/s, Aug. 11.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2880	2990	2100	2150	2290	2130	2480	2930	6260	3510	2260	2410
2	2840	2970	2200	2000	2350	2120	2270	3160	6480	3320	2130	2580
3	2660	2940	2400	2050	2230	2080	2020	2950	6020	3350	2160	3390
4	2730	3030	2350	2100	2090	2120	1970	2860	5410	3350	2220	2960
5	2770	3120	2250	2050	1940	2260	2170	2880	6090	3700	2210	2920
6	2920	3160	2300	2000	2020	2210	2240	2810	8400	3850	2160	3070
7	3210	3490	2350	1980	2110	2410	2210	2710	10300	3800	2060	3170
8	3410	3280	2400	1940	2120	2330	2180	3000	10900	3930	1950	3030
9	3440	3270	2350	2050	2190	2180	2510	3520	10700	3890	1840	2910
10	3410	3080	2250	2150	2140	2150	2960	3690	11100	4730	1810	2890
11	3400	3060	2150	2250	2030	2100	2890	3420	11300	4620	1800	2860
12	3400	2990	2160	2300	2140	2150	2640	3250	11700	3920	1850	2840
13	3190	2910	2180	2320	2180	2280	2450	3330	11400	3680	1940	2830
14	2970	2840	2200	2430	2130	2190	2320	3170	9180	3450	2120	2800
15	2950	2840	2230	2550	2250	2140	2150	3000	8580	3180	2390	2710
16	3260	2740	2250	2500	2130	2320	2040	3200	7900	2990	2460	2680
17	3710	2710	2300	2370	1860	2090	2100	3630	6790	2810	2530	2660
18	3830	2710	2200	2230	1990	2050	2340	3550	6420	2660	2750	2800
19	3690	2710	2250	2240	2100	2020	2530	3360	6160	2700	2820	3490
20	3600	2740	2200	2290	2170	2000	2530	3190	6160	2790	2680	3490
21	3540	2730	2250	2250	2110	2280	2530	3190	5600	2880	2770	3480
22	3470	2850	2300	2310	2090	2330	2430	3340	5190	2810	2740	3450
23	3550	2590	2250	2040	2070	2340	2660	3910	4980	2850	2700	3390
24	3610	2620	2250	2090	2100	2340	3120	4830	4780	2840	2760	3230
25	3500	2770	2200	2030	2060	2430	3250	6290	4930	2930	2650	3140
26	3300	2800	2200	2040	2080	2390	3190	6840	4740	2890	2550	2980
27	3390	2700	2180	2070	2070	2220	2970	6990	4440	2890	2500	2750
28	3680	2450	2150	2110	2110	1930	2780	6660	4250	2750	2530	3070
29	3140	2200	2100	2080	---	2170	2600	6650	4000	2510	2490	2940
30	3020	2250	2300	2050	---	2580	2570	7320	3760	2390	2310	3020
31	3030	---	2200	2210	---	2760	---	6800	---	2320	2290	---
TOTAL	101500	85540	69450	67230	59150	69100	75100	126430	213920	100290	72430	89940
MEAN	3274	2851	2240	2169	2112	2229	2503	4078	7131	3235	2336	2998
MAX	3830	3490	2400	2550	2350	2760	3250	7320	11700	4730		

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued
(National stream-quality accounting network station)

PERIOD OF RECORD.--October 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1979 to current year.

WATER TEMPERATURE: October 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1979.

REMARKS.--Water-quality data collection was moved 5.5 miles upstream to this site from previous site 09163530.

Water-quality records for this site are considered to be equivalent to data obtained at old site. Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,940 microsiemens Aug. 13, 1981; minimum, 277 microsiemens June 11, 1985.

WATER TEMPERATURE: Maximum, 27.0°C Aug. 7-9, 1981; minimum, 0.0°C on many days during winter months

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,600 microsiemens Oct. 4; minimum, 480 microsiemens June 9, 10, and 13.

WATER TEMPERATURE: Maximum, 26.0°C July 17; minimum, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT										
18...	1300	3840	1340	8.2	11.0	150	10.2	240	--	640
NOV										
09...	1200	3180	1410	8.4	6.0	--	--	--	--	--
DEC										
12...	1200	2290	1560	8.2	0.0	19	12.4	K4	<2	K34
JAN										
30...	1100	1960	1490	8.2	0.0	--	--	--	--	--
FEB										
27...	1300	2200	1460	8.4	6.5	7.0	10.1	K2	K4	K8
MAR										
20...	1200	1940	1440	8.2	9.0	--	--	--	--	--
APR										
24...	1200	3170	1160	8.1	14.5	120	7.2	K65	350	870
MAY										
22...	1200	3200	1210	8.3	17.5	--	--	--	--	--
JUN										
12...	1200	12900	534	8.1	16.0	190	7.2	270	K240	960
JUL										
12...	1200	3950	1100	8.3	23.0	--	--	--	--	--
AUG										
14...	1400	2160	1460	8.4	21.5	10	7.7	180	160	190
SEP										
07...	1040	3120	1380	8.1	21.5	--	--	--	--	--

K Based on non-ideal colony count.

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	ALKA- LITY LAB (MG/L AS CACO3)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3)
OCT 18...	460	120	39	110	2	4.5	171	171	209	0
NOV 09...	460	120	38	140	3	4.4	--	172	--	--
DEC 12...	470	120	41	150	3	4.8	185	187	226	0
JAN 30...	390	100	35	150	3	4.8	--	175	--	--
FEB 27...	400	99	36	150	3	4.5	158	158	173	10
MAR 20...	390	98	35	140	3	4.8	--	163	--	--
APR 24...	390	100	33	100	2	4.0	150	146	183	0
MAY 22...	410	110	32	95	2	3.3	--	149	--	--
JUN 12...	200	56	14	35	1	1.7	93	93	113	0
JUL 12...	340	93	26	67	2	3.0	--	151	--	--
AUG 14...	570	150	47	130	2	4.8	162	148	181	8
SEP 07...	490	130	39	110	2	4.9	--	161	--	--

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDOS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDOS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDOS, DIS- SOLVED (TONS PER AC-FT)	SOLIDOS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
OCT 18...	420	95	0.4	10	927	907	1.26	9610	0.87
NOV 09...	370	150	0.4	8.0	--	937	1.27	8040	--
DEC 12...	400	140	0.4	9.9	1030	981	1.40	6370	0.89
JAN 30...	350	160	0.4	8.3	--	917	1.25	4850	--
FEB 27...	360	150	0.3	4.5	956	903	1.30	5680	0.37
MAR 20...	280	150	<0.1	6.5	--	815	1.11	4270	--
APR 24...	330	85	0.2	11	829	758	1.13	7100	0.98
MAY 22...	330	80	0.2	9.0	--	752	1.02	6500	--
JUN 12...	130	24	0.2	8.2	328	328	0.45	11400	--
JUL 12...	290	64	0.3	11	--	645	0.88	6880	--
AUG 14...	530	110	0.4	6.1	1100	1080	1.50	6420	1.19
SEP 07...	430	100	0.5	10	--	926	1.26	7800	--

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 18...	0.01	0.88	0.16	0.12	0.64	0.8	0.12	0.02	0.01
NOV 09...	--	0.59	--	--	--	--	--	--	--
DEC 12...	0.01	0.90	0.05	0.04	0.35	0.4	0.09	0.04	<0.01
JAN 30...	--	0.81	--	--	--	--	--	--	--
FEB 27...	0.03	0.40	0.01	0.07	0.49	0.5	0.04	0.19	0.01
MAR 20...	--	0.60	--	--	--	--	--	--	--
APR 24...	0.02	1.00	0.06	0.07	0.94	1.0	0.29	0.05	0.03
MAY 22...	--	0.70	--	--	--	--	--	--	--
JUN 12...	<0.01	0.50	0.14	0.12	0.36	0.5	0.36	0.27	0.02
JUL 12...	--	<0.10	--	--	--	--	--	--	--
AUG 14...	0.01	1.20	<0.01	0.03	--	0.7	0.05	0.01	<0.01
SEP 07...	--	1.10	--	--	--	--	--	--	--

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 18...	1300	20	<1	70	<0.5	<1	<1	<3	18	17	1
FEB 27...	1300	40	<1	51	<0.5	<1	<5	<3	<10	26	<10
JUN 12...	1200	20	1	49	<0.5	<1.0	<1	<3	2	38	<1
AUG 14...	1400	30	1	57	<0.5	<1.0	<1	<3	2	15	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 18...	58	4	<0.1	20	2	7	<1.0	1400	<6	15
FEB 27...	47	46	0.1	<10	<10	6	<1.0	1100	<6	3
JUN 12...	21	10	<0.1	<10	<1	2	<1.0	500	<6	3
AUG 14...	73	4	<0.1	10	2	10	<1.0	1700	<6	<3

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDIMENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
18...	1300	3840	361	3740	97
DEC					
12...	1200	2290	114	706	52
FEB					
27...	1300	2200	38	226	75
APR					
24...	1200	3170	346	2960	92
JUN					
12...	1200	12900	942	32800	67
AUG					
14...	1400	2160	92	537	56

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C) WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1420	1470	1500	---	1470	1450	1200	1260	729	948	---	1360
2	1430	1480	1510	---	1440	1440	1250	1250	735	990	---	1370
3	1450	1510	1550	---	1420	1430	1280	1270	755	1050	---	1330
4	1490	1530	1550	---	1410	1420	1280	1300	794	1080	---	1330
5	1480	1510	1520	---	1440	1420	1290	1330	820	1090	---	1330
6	1480	1510	1520	---	1440	1420	1270	1280	730	1080	---	1320
7	1480	1490	1560	---	1460	1400	1230	1280	583	1090	---	1360
8	1450	1460	1540	---	1490	1410	1230	1260	526	1060	---	1320
9	1350	1450	1500	---	1460	1400	1260	1180	511	1090	---	1290
10	1350	1470	1480	---	1440	1420	1180	1080	512	1090	---	1310
11	1340	1490	---	1510	1430	1430	1130	1050	529	1050	---	1320
12	1340	1480	---	1450	1410	1430	1160	1080	510	1080	---	1320
13	1350	1490	---	1440	1430	1440	1170	1070	498	1120	---	1320
14	1380	1500	---	1400	1430	1430	1200	1090	535	1150	---	1310
15	1400	1490	---	1370	1390	1420	1220	1120	572	1180	1470	1280
16	1400	1500	---	1380	1390	1420	1230	1140	590	1200	1150	1250
17	1360	1500	---	1390	1410	1420	1230	1130	627	1240	1100	1250
18	1350	1520	---	1410	1410	1390	1230	1100	679	1270	1100	1120
19	1380	1510	---	1430	1390	1400	1210	1090	717	1300	1090	1090
20	1340	1520	---	1480	1430	1440	1160	1110	708	1320	1070	1090
21	1330	1520	---	1440	1470	1430	1140	1130	717	1320	1090	1060
22	1340	1500	---	1410	1440	1400	1210	1160	753	1310	1110	---
23	1350	1500	---	1450	1420	1340	1230	1140	776	1310	1120	---
24	1350	1490	---	1460	1420	1310	1190	1040	797	1280	1160	---
25	1360	1520	---	1450	1410	1290	1130	890	818	1350	1240	---
26	1370	1510	---	1500	1410	1260	1100	740	847	1310	1220	---
27	1400	1490	---	1510	1430	1270	1110	700	828	1310	1240	---
28	1390	1480	---	1470	1460	1270	1140	700	855	1320	1260	---
29	1370	1470	---	1490	---	1260	1200	717	862	1330	1290	---
30	1390	1460	---	1480	---	1250	1250	709	896	1350	1320	---
31	1430	---	---	1460	---	1200	---	702	---	---	1340	---
MEAN	1390	1490	---	---	1430	1380	1200	1070	694	---	---	---

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE--Continued

WATER TEMPERATURE (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	16.0	6.6	5.0	1.2	.0	.0	.0	2.7	1.6	8.6	6.6
2	16.9	15.2	5.8	4.4	1.2	.0	.0	.0	2.5	1.2	8.7	6.7
3	16.0	14.2	5.6	4.0	1.1	.0	.0	.0	1.8	.3	8.0	7.3
4	15.3	14.1	5.9	4.4	1.1	.0	.0	.0	1.6	.2	9.2	6.8
5	15.4	13.1	6.3	4.6	1.6	.1	.0	.0	2.0	.1	8.8	8.0
6	14.9	13.0	7.5	6.0	2.8	1.4	.0	.0	2.5	.6	8.1	6.6
7	15.0	12.9	7.2	6.5	3.2	2.0	.0	.0	2.3	1.3	8.0	5.5
8	14.6	12.7	6.8	5.7	2.8	1.5	.0	.0	3.2	1.1	9.3	6.8
9	14.6	12.4	7.1	5.8	2.0	1.1	.0	.0	2.9	1.3	9.4	7.6
10	14.6	12.7	7.3	5.7	1.4	.4	.0	.0	3.6	1.6	10.5	8.3
11	14.5	12.7	7.8	6.0	.7	.0	.2	.0	4.2	2.0	10.2	9.0
12	14.6	12.5	8.0	6.4	.0	.0	.5	.0	4.9	3.2	10.0	8.2
13	14.2	12.5	8.0	6.6	.0	.0	1.1	.0	5.1	3.8	8.3	6.6
14	14.9	13.1	7.6	6.3	.0	.0	1.6	.4	4.4	3.7	6.9	4.9
15	15.1	13.4	6.2	5.1	.0	.0	2.0	1.0	3.5	1.3	7.2	5.3
16	14.9	13.5	5.1	3.9	.2	.0	1.3	.6	1.7	.2	7.9	5.4
17	13.8	12.5	4.4	3.2	.0	.0	1.1	.2	1.6	.2	8.1	6.1
18	12.5	11.1	4.2	2.9	.0	.0	.5	.0	3.7	1.2	9.6	6.7
19	11.5	10.0	4.4	2.8	.0	.0	.5	.0	4.9	2.6	10.6	7.6
20	10.5	9.4	4.8	3.2	.0	.0	1.5	.0	5.0	2.8	11.2	8.9
21	10.7	9.1	5.1	3.5	.3	.0	1.2	.1	5.5	3.5	12.9	10.0
22	12.6	10.5	5.1	3.7	.3	.0	.5	.0	5.6	3.3	13.7	10.8
23	12.4	10.5	5.3	3.7	.4	.0	.4	.0	6.3	3.9	14.0	12.1
24	12.9	10.3	4.9	4.2	.2	.0	.8	.0	6.9	4.4	13.7	11.4
25	12.3	11.4	5.8	4.3	.2	.0	.2	.0	7.1	5.0	14.0	11.4
26	11.3	10.0	6.0	5.2	.0	.0	.4	.0	7.9	5.5	14.4	11.2
27	10.3	7.8	5.3	4.1	.0	.0	.3	.0	8.8	6.6	13.6	12.0
28	9.5	7.9	3.9	2.8	.0	.0	.1	.0	9.1	6.8	13.4	11.9
29	7.8	5.1	2.7	1.5	.0	.0	.9	.0	---	---	12.3	10.5
30	6.8	5.6	1.6	.5	.0	.0	.9	.0	---	---	11.5	9.6
31	6.4	4.9	---	---	.0	.0	2.0	.7	---	---	12.8	10.0
MONTH	17.5	4.9	8.0	.5	3.2	.0	2.0	.0	9.1	.1	14.4	4.9
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.7	10.4	10.9	9.9	16.0	14.1	25.5	22.6	---	---	22.3	20.6
2	15.1	11.8	12.9	9.9	15.2	12.8	25.8	23.4	---	---	22.6	20.7
3	16.2	13.2	14.0	11.8	17.3	14.4	24.3	22.8	---	---	22.1	20.6
4	16.5	14.5	14.9	12.6	18.9	16.5	24.9	21.8	---	---	24.0	21.2
5	15.5	13.8	16.9	14.0	20.2	18.3	23.9	22.3	---	---	23.7	21.9
6	16.2	13.3	17.8	15.2	20.1	18.6	23.6	21.2	---	---	23.4	21.3
7	15.3	13.6	17.3	15.8	19.6	17.4	23.1	21.4	---	---	23.2	20.9
8	14.7	13.3	16.3	14.3	19.5	17.4	21.9	20.9	---	---	22.6	20.7
9	13.5	12.1	15.2	12.7	19.2	17.5	23.7	21.1	---	---	21.8	20.0
10	14.8	12.1	15.9	13.0	19.3	17.3	24.3	22.1	---	---	22.1	19.5
11	14.7	12.5	15.4	14.0	18.4	16.6	24.6	22.9	---	---	22.4	19.7
12	15.9	13.0	15.7	13.5	18.0	15.9	24.9	22.7	---	---	22.2	19.7
13	16.2	13.6	17.0	14.4	17.7	15.3	24.4	22.7	---	---	22.2	19.5
14	16.2	14.0	17.1	15.2	18.0	15.9	25.0	22.6	---	---	22.1	19.5
15	17.7	14.7	16.3	14.9	18.3	16.3	24.3	22.4	22.3	19.9	22.1	19.5
16	17.5	15.5	16.9	13.9	17.9	16.0	24.8	21.9	21.6	20.5	21.0	19.8
17	16.7	15.1	17.1	14.5	18.6	16.2	26.0	22.8	23.5	20.6	21.0	18.8
18	15.5	14.1	16.8	15.5	19.1	17.2	25.2	23.3	23.7	21.5	20.0	17.0
19	16.8	13.2	17.0	15.0	19.4	17.4	24.2	21.3	22.2	20.1	17.9	15.7
20	17.8	14.7	17.3	15.0	20.2	18.1	25.0	22.1	21.2	19.7	17.3	15.9
21	17.4	15.2	18.9	15.5	20.6	18.9	24.5	22.6	22.2	19.7	17.3	15.1
22	16.2	15.1	---	---	21.0	19.5	24.6	21.8	22.1	19.9	---	---
23	16.2	14.7	19.9	17.5	21.4	20.1	23.6	21.7	21.7	19.0	---	---
24	15.7	14.5	19.1	17.9	22.4	20.6	23.4	21.4	21.5	19.4	---	---
25	15.0	13.6	17.8	16.1	23.0	21.4	22.8	20.5	21.0	19.0	---	---
26	14.5	13.0	17.2	15.9	23.4	21.9	23.6	21.0	20.8	18.9	---	---
27	13.4	11.5	17.3	15.0	23.5	21.9	23.9	21.5	21.5	18.8	---	---
28	14.1	12.1	17.1	15.6	23.2	21.5	23.8	21.7	22.2	19.3	---	---
29	13.7	11.6	16.0	14.8	23.7	21.6	23.0	21.0	22.7	20.0	---	---
30	12.5	10.9	16.1	14.6	23.9	22.0	23.6	20.9	22.8	20.7	---	---
31	---	---	16.3	14.3	---	---	---	---	22.6	20.9	---	---
MONTH	17.8	10.4	---	---	23.9	12.8	---	---	---	---	---	---

09165000 DOLORES RIVER BELOW RICO, CO

LOCATION.--Lat 37°38'20", long 108°03'35", Dolores County, Hydrologic Unit 14030002, on left bank at upstream side of Montelores bridge northwest of State Highway 145 (relocated), at Dolores-Montezuma County line, 0.5 mi upstream from Ryman Creek, and 4.0 mi southwest of Rico.

DRAINAGE AREA.--105 mi².

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,422.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 30 to Nov. 7, Nov. 9-19, and Nov 22 to Apr. 4. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--39 years, 136 ft³/s; 98,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s, May 24, 1984, gage height, 5.95 ft; from rating curve extended above 1,620 ft³/s, maximum gage height, 6.15 ft, June 10, 1952; minimum daily discharge, 4.8 ft³/s, Nov. 29, 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1885 occurred Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 5	2100	*938	*4.66	No other peak greater than base discharge.			
Minimum daily, 4.8 ft ³ /s, Nov. 29.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	16	9.0	7.0	7.0	15	19	67	321	84	40	35
2	22	16	10	7.5	7.0	15	20	58	276	83	40	33
3	22	14	9.5	7.5	7.0	15	21	67	411	99	38	32
4	42	14	10	7.5	7.0	16	23	90	600	102	38	37
5	39	14	11	7.5	7.0	16	25	114	713	99	40	60
6	29	14	12	7.5	7.5	16	24	148	694	184	40	52
7	28	14	11	8.0	7.5	14	28	199	655	210	35	43
8	25	15	8.5	8.5	7.5	14	30	229	608	189	35	41
9	25	14	9.0	8.5	7.5	15	27	234	589	198	33	40
10	25	14	9.0	9.0	7.5	16	27	236	648	155	35	37
11	25	13	7.0	9.0	7.5	16	36	228	659	120	34	34
12	24	13	5.0	9.0	8.0	16	40	178	516	103	39	32
13	24	13	5.0	9.0	9.0	15	42	195	431	94	52	30
14	24	13	6.0	9.0	9.5	15	44	281	370	99	72	28
15	24	12	6.5	9.0	8.5	15	62	300	309	95	155	30
16	26	11	7.0	9.0	7.5	15	75	273	261	83	127	30
17	24	11	7.5	8.5	8.0	15	82	270	231	83	125	48
18	22	12	7.5	8.0	8.5	15	70	302	225	76	110	54
19	20	12	7.5	8.0	8.5	15	58	299	220	69	83	72
20	22	13	7.0	8.5	8.5	15	54	295	191	65	71	76
21	24	13	7.0	8.0	8.5	16	76	354	178	66	74	73
22	24	12	7.0	7.5	8.5	17	92	417	159	59	64	58
23	24	11	7.0	7.0	8.5	18	97	459	145	53	60	56
24	24	11	7.0	6.5	9.5	19	86	567	141	57	56	57
25	23	13	7.0	6.0	10	20	73	539	129	63	51	51
26	22	12	7.0	6.0	11	21	73	506	119	53	46	47
27	19	10	7.0	6.5	13	22	64	465	110	48	42	42
28	19	6.5	7.0	6.5	14	23	66	472	104	44	41	116
29	17	4.8	7.0	6.5	---	23	96	451	97	42	39	138
30	15	6.0	7.0	7.0	---	23	74	311	89	44	39	101
31	15	---	7.0	7.0	---	22	---	283	---	41	37	---
TOTAL	740	367.3	242.0	240.0	239.0	528	1604	8887	10199	2860	1791	1583
MEAN	23.9	12.2	7.81	7.74	8.54	17.0	53.5	287	340	92.3	57.8	52.8
MAX	42	16	12	9.0	14	23	97	567	713	210	155	138
MIN	15	4.8	5.0	6.0	7.0	14	19	58	89	41	33	28
AC-FT	1470	729	480	476	474	1050	3180	17630	20230	5670	3550	3140

CAL YR 1989 TOTAL 33284.3 MEAN 91.2 MAX 576 MIN 4.8 AC-FT 66020
WTR YR 1990 TOTAL 29280.3 MEAN 80.2 MAX 713 MIN 4.8 AC-FT 58080

09166500 DOLORES RIVER AT DOLORES, CO

LOCATION.--Lat 37°28'21", long 108°29'49", in SW¼SW¼ sec.10, T.37 N., R.15 W., Montezuma County, Hydrologic Unit 14030002, on left bank 0.25 mi upstream from bridge on State Highway 184 in Dolores and 0.8 mi upstream from Lost Canyon Creek.

DRAINAGE AREA.--504 mi².

PERIOD OF RECORD.--June 1895 to October 1903, August 1910 to November 1912, October 1921 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 859: 1937. WRD Colo. 1972: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,940 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1713 or 1733 for history of changes prior to Oct. 7, 1952. Oct. 7, 1952 to Nov. 16, 1983, at site 0.4 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 31 to Nov. 12, Nov. 15-19, 21, 23-30, Dec. 2 to Mar. 20. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 2,000 acres upstream from station. Flow partly regulated by Ground Hog Reservoir, capacity, 21,710 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--79 years (water years 1896-1903, 1911-12, 1922-90), 435 ft³/s; 315,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s, Oct. 5, 1911, gage height, 10.2 ft, site and datum then in use, from rating curve extended above 2,800 ft³/s; minimum daily, 8.0 ft³/s, Aug. 16, 1896.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, that of Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 25	0130	*1,700	*4.42				

Minimum daily, 11 ft³/s, Dec. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	36	26	18	18	38	65	295	718	186	76	115
2	41	36	26	18	18	38	68	312	589	176	73	112
3	42	36	24	18	18	38	78	318	695	194	71	111
4	63	38	26	18	18	40	81	394	1030	257	69	126
5	119	38	28	18	18	44	86	416	1270	203	67	156
6	85	38	30	19	19	38	86	476	1310	400	122	180
7	72	37	26	20	19	36	87	619	1230	516	122	167
8	69	35	22	20	19	38	102	754	1160	454	115	180
9	64	32	24	22	19	42	105	782	1100	412	115	164
10	61	37	22	22	19	50	94	752	1180	365	113	147
11	60	37	16	22	20	60	97	793	1220	294	112	138
12	59	37	11	22	22	48	117	619	1010	248	112	126
13	57	38	14	23	23	40	135	577	829	222	125	119
14	55	36	16	23	24	35	140	803	694	262	177	113
15	54	32	17	23	20	35	172	945	585	261	276	78
16	59	30	18	22	19	36	230	840	481	234	331	67
17	63	30	19	20	20	40	269	781	427	211	332	76
18	59	32	20	20	21	42	253	862	401	211	290	133
19	54	34	19	20	22	48	236	906	404	185	234	198
20	51	36	17	21	22	60	207	805	364	165	205	196
21	53	36	17	20	22	64	249	904	333	160	224	206
22	64	34	17	18	22	65	321	1170	316	142	203	176
23	62	30	18	17	23	73	351	1250	299	128	187	154
24	57	28	18	16	26	77	354	1510	283	117	175	154
25	55	32	18	15	28	85	313	1450	264	132	161	142
26	57	32	18	16	30	86	295	1280	249	122	150	126
27	56	26	17	17	34	92	276	1100	231	106	143	111
28	49	18	17	17	36	82	256	1100	219	97	136	141
29	47	12	17	17	---	76	360	1090	207	86	127	282
30	38	16	17	17	---	73	328	804	192	81	125	235
31	36	---	18	18	---	65	---	660	---	79	120	---
TOTAL	1804	969	613	597	619	1684	5811	25367	19290	6706	4888	4429
MEAN	58.2	32.3	19.8	19.3	22.1	54.3	194	818	643	216	158	148
MAX	119	38	30	23	36	92	360	1510	1310	516	332	282
MIN	36	12	11	15	18	35	65	295	192	79	67	67
AC-FT	3580	1920	1220	1180	1230	3340	11530	50320	38260	13300	9700	8780

CAL YR 1989 TOTAL 112894 MEAN 309 MAX 1690 MIN 11 AC-FT 223900
WTR YR 1990 TOTAL 72777 MEAN 199 MAX 1510 MIN 11 AC-FT 144400

09166950 LOST CANYON CREEK NEAR DOLORES, CO

LOCATION.--Lat 37°26'46", long 108°28'07", in SE½SE¼ sec.23, T.37N., R.15W., Montezuma County, Hydrologic Unit 14030002, on right bank 3 mi upstream from mouth, and 2.5 mi southeast of Dolores.

DRAINAGE AREA.--71.3 mi².

PERIOD OF RECORD.--April 1984 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,030 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges: Records fair. Several small storage reservoirs and diversions for irrigation of about 4,700 acres in the San Juan River basin and one diversion for irrigation of about 10 acres in Lost Canyon in the Dolores River basin. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE--6 years, 24.2 ft³/s; 17,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 744 ft³/s, Apr. 2, 1986, gage height, 7.23 ft; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35 ft³/s at 0615 May 8, gage height, 2.63 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	2.7	1.8	.00	.11	.00	.00
2	.00	.00	.00	.00	.00	.01	2.1	3.0	.00	.09	.00	.00
3	.00	.00	.00	.00	.00	.01	1.1	2.2	.00	.06	.00	.00
4	.00	.00	.00	.00	.00	.05	.39	16	.00	.04	.00	.00
5	.00	.00	.00	.00	.00	.05	.38	18	.00	.02	.00	.00
6	.00	.00	.00	.00	.00	.03	.36	5.7	.00	.12	.00	.00
7	.00	.00	.00	.00	.00	.04	.38	11	.00	.14	.00	.00
8	.00	.00	.00	.00	.00	.11	.57	21	.00	.12	.00	.00
9	.00	.00	.00	.00	.00	.13	1.1	9.7	.00	.06	.00	.00
10	.00	.00	.00	.00	.00	.18	.91	3.5	.00	.03	.00	.00
11	.00	.00	.00	.00	.00	.24	.55	2.6	.00	.01	.00	.00
12	.00	.00	.00	.00	.00	.17	.41	1.7	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.10	.33	1.3	.00	.02	.00	.00
14	.00	.00	.00	.00	.00	.12	.27	1.0	.00	.04	.00	.00
15	.00	.00	.00	.00	.00	.15	.23	.94	.00	.02	.00	.00
16	.00	.00	.00	.00	.00	.13	.21	.69	.00	.18	.00	.00
17	.00	.00	.00	.00	.00	.16	.19	.65	.00	.30	.00	.00
18	.00	.00	.00	.00	.00	.25	.41	.37	.00	.19	.00	.00
19	.00	.00	.00	.00	.00	.24	1.4	.25	.00	.11	.00	.00
20	.00	.00	.00	.00	.00	.22	1.1	.35	.00	.05	.00	.00
21	.00	.00	.00	.00	.00	.23	.90	.31	.01	.03	.00	.00
22	.00	.00	.00	.00	.00	.20	.70	.27	.01	.02	.00	.00
23	.00	.00	.00	.00	.00	.12	.98	.22	.01	.01	.00	.00
24	.00	.00	.00	.00	.00	.09	1.2	.17	.01	.00	.00	.00
25	.00	.00	.00	.00	.00	1.1	1.5	.08	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	3.2	1.1	.04	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	3.4	.93	.02	.00	.00	.00	.00
28	.00	.00	.00	.00	.01	4.0	1.0	.01	.00	.00	.00	.00
29	.00	.00	.00	.00	---	4.6	.93	.01	.02	.00	.00	.00
30	.00	.00	.00	.00	---	4.0	1.5	.01	.09	.00	.00	.00
31	.00	---	.00	.00	---	3.5	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.01	26.83	25.83	102.89	0.15	1.77	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.87	.86	3.32	.005	.057	.000	.000
MAX	.00	.00	.00	.00	.01	4.6	2.7	21	.09	.30	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.02	53	51	204	.3	3.5	.00	.00

CAL YR 1989 TOTAL 4015.53 MEAN 11.0 MAX 153 MIN .00 AC-FT 7960
WTR YR 1990 TOTAL 157.48 MEAN .43 MAX 21 MIN .00 AC-FT 312

DOLORES RIVER BASIN

09169500 DOLORES RIVER AT BEDROCK, CO

LOCATION.--Lat 38°18'37", long 108°53'05", in NW¼SW¼ sec.20, T.47 N., R.18 W., Montrose County, Hydrologic Unit 14030002, on right bank at upstream side of bridge, 0.4 mi southeast of Bedrock, and 3.1 mi upstream from East Paradox Creek.

DRAINAGE AREA.--2,024 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1917 to September 1922 (monthly discharge only for some periods, published in WSP 1313), August 1971 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,940 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 1, 1971, nonrecording gage at different datum.

REMARKS.--Estimated daily discharges: Nov. 30 to Feb. 21, and Sept. 8-12. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 5,000 acres upstream from station, and about 74,760 acres in the San Juan River basin. Flow regulated since Mar. 19, 1984, by McPhee Reservoir, capacity 381,000 acre-ft.

AVERAGE DISCHARGE.--17 years (water years 1918-22, 1972-83), 497 ft³/s; 360,100 acre-ft/yr, prior to completion of McPhee Reservoir. 6 years (water years 1984-90), 406 ft³/s; 294,100 acre-ft/yr, subsequent to completion of McPhee Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,280 ft³/s, Apr. 30, 1973, gage height, 12.09 ft, from floodmarks, from rating curve extended above 8,700 ft³/s; no flow, Sept. 13, 1974, Aug. 15-18, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1970, reached a stage of 7.15 ft, present datum, from floodmarks (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 956 ft³/s at about 0430 Sept. 6, gage height, 4.91 ft; minimum daily, 4.0 ft³/s, June 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	77	55	70	70	93	29	29	28	32	36	31
2	65	77	70	70	70	89	30	37	26	33	35	35
3	64	77	75	70	70	90	31	36	23	33	36	40
4	66	78	75	75	75	88	31	38	16	42	36	76
5	68	78	80	70	70	77	30	40	13	41	36	120
6	73	78	80	65	70	64	30	37	11	44	34	340
7	73	78	80	55	70	63	29	31	9.0	44	33	122
8	70	78	75	65	75	53	32	25	8.3	70	33	70
9	70	79	70	70	80	47	31	19	13	138	33	38
10	70	79	70	70	85	40	31	15	13	126	33	40
11	70	79	65	75	85	38	31	13	18	55	33	34
12	70	79	60	75	85	40	30	14	16	43	33	30
13	70	79	55	75	90	39	28	21	13	40	34	23
14	71	79	55	75	95	39	27	30	12	40	37	22
15	72	78	65	75	75	40	26	29	11	45	88	21
16	81	78	75	75	70	37	25	27	11	45	96	20
17	77	78	80	75	70	34	22	25	10	46	113	20
18	75	78	80	75	80	34	20	33	9.0	46	78	45
19	73	79	75	75	85	33	26	33	8.3	46	62	99
20	73	79	70	75	95	33	27	31	7.0	55	56	83
21	74	79	70	70	90	33	27	33	4.0	38	47	56
22	76	79	70	70	88	32	27	33	12	36	39	44
23	77	79	75	70	95	31	27	31	12	36	38	35
24	78	79	75	65	95	30	29	29	13	37	36	34
25	76	79	75	65	95	29	27	34	25	40	34	31
26	77	79	70	70	95	28	23	34	29	36	34	29
27	77	79	70	70	94	28	22	36	31	33	32	28
28	77	77	70	70	95	28	26	36	31	44	31	31
29	75	71	70	75	---	28	27	34	30	49	31	84
30	75	60	70	80	---	32	26	31	30	40	31	71
31	76	---	70	80	---	31	---	30	---	36	31	---
TOTAL	2253	2326	2195	2215	2312	1401	827	924	492.6	1489	1359	1752
MEAN	72.7	77.5	70.8	71.5	82.6	45.2	27.6	29.8	16.4	48.0	43.8	58.4
MAX	81	79	80	80	95	93	32	40	31	138	113	340
MIN	64	60	55	55	70	28	20	13	4.0	32	31	20
AC-FT	4470	4610	4350	4390	4590	2780	1640	1830	977	2950	2700	3480

CAL YR 1989 TOTAL 64581 MEAN 177 MAX 1000 MIN 29 AC-FT 128100
WTR YR 1990 TOTAL 19545.6 MEAN 53.5 MAX 340 MIN 4.0 AC-FT 38770

09169500 DOLORES RIVER AT BEDROCK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1979 to current year.

WATER TEMPERATURES: November 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1979.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 6,970 microsiemens Aug. 14, 1987; minimum, 140 microsiemens May 25, 1983.

WATER TEMPERATURES: Maximum, 33.5°C Aug. 7, 1981; minimum, -0.5°C Dec. 3-8, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,790 microsiemens Sept. 12; minimum recorded, 358 microsiemens Sept. 20.

WATER TEMPERATURES: Maximum recorded, 30.6°C June 21; minimum recorded, 0.0°C many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT										
02...	1340	63	540	8.4	16.5	160	44	11	50	2
NOV										
14...	1230	80	556	8.4	6.0	150	42	10	51	2
JAN										
02...	1130	83	562	8.3	0.0	170	49	11	47	2
MAR										
06...	1440	66	660	8.5	6.0	160	46	12	71	2
APR										
11...	1400	32*	1200	8.4	16.5	220	57	20	150	4
MAY										
16...	1210	26	1560	8.3	15.5	370	86	38	180	4
JUN										
01...	1200	32	1430	8.5	15.5	390	97	36	150	3
06...	2000	8.1	1590	8.5	24.0	370	89	37	180	4
JUL										
17...	1330	45	760	8.5	25.0	200	56	14	71	2
AUG										
08...	1000	31	618	8.5	21.5	160	44	11	60	2
SEP										
05...	1230	193	670	8.1	22.0	160	46	10	77	3
06...	0915	400	842	8.0	20.0	280	85	17	64	2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT										
02...	3.3	114	72	69	0.2	2.6	320	0.44	54.8	<0.10
NOV										
14...	2.9	122	41	70	0.1	3.6	294	0.40	63.4	<0.10
JAN										
02...	2.5	132	43	70	0.1	4.9	307	0.42	68.6	<0.10
MAR										
06...	3.4	123	59	100	0.2	3.5	369	0.50	65.7	<0.10
APR										
11...	6.0	154	96	220	<0.1	3.6	645	0.88	56.6	<0.10
MAY										
16...	6.7	149	340	220	0.1	3.4	964	1.31	68.9	--
JUN										
01...	5.8	124	390	180	0.3	5.9	939	1.28	81.2	<0.10
06...	6.8	153	330	210	<0.1	5.8	950	1.29	20.8	<0.10
JUL										
17...	4.7	130	110	100	0.3	5.4	440	0.60	53.4	0.10
AUG										
08...	4.1	125	41	89	0.5	2.4	327	0.44	27.5	<0.10
SEP										
05...	6.9	150	51	110	0.1	4.8	396	0.54	206	0.10
06...	6.4	109	260	47	<0.1	5.1	552	0.75	596	0.40

DOLORES RIVER BASIN

09169500 DOLORES RIVER AT BEDROCK, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	539	540	693	573	508	547	1170	1230	1450	996	678	---
2	537	535	656	557	496	554	1150	1260	1430	872	691	---
3	531	538	628	522	523	568	1120	1420	1460	836	778	---
4	539	542	618	527	519	575	1130	1370	1460	874	786	---
5	570	546	620	593	539	587	1150	1500	1500	1020	685	---
6	529	541	582	594	531	635	1160	1310	1530	805	682	719
7	522	540	556	626	527	702	1140	1080	1560	855	696	921
8	522	541	583	632	516	743	1120	1160	1680	1020	---	960
9	525	541	601	572	509	766	1170	1280	1760	955	---	1030
10	520	543	601	545	522	833	1220	1440	1800	1390	---	1700
11	523	542	605	521	521	902	1180	1640	1780	1940	---	2700
12	517	536	635	506	526	924	1180	1920	1970	2000	---	2730
13	514	537	682	499	512	960	1180	2050	2080	1670	---	2530
14	527	552	651	492	509	929	1200	1890	1850	1490	---	2140
15	526	552	656	487	515	934	1210	1660	1870	1140	---	1800
16	585	554	656	516	539	934	1210	1570	1890	916	---	1440
17	541	559	637	515	551	962	1220	1450	1900	773	---	1210
18	536	560	617	531	549	1000	1190	1300	1930	690	---	1070
19	541	558	598	542	556	1010	1170	1810	1910	679	---	832
20	543	559	618	555	542	1010	1210	1760	1930	1140	---	380
21	546	567	597	537	535	1030	1320	1660	1930	847	---	424
22	553	564	597	533	545	1030	1230	1530	2180	877	---	555
23	540	566	567	552	532	1040	1200	1570	2200	727	---	907
24	532	572	563	585	515	1040	1180	1630	1900	714	---	1250
25	536	575	551	567	508	1040	1180	1550	1790	772	---	2130
26	561	574	548	549	515	1050	1270	1480	1820	760	---	1760
27	554	581	566	546	518	1050	1240	1460	1530	668	---	1250
28	536	560	590	551	533	1050	1220	1440	1400	664	---	1060
29	541	569	563	533	---	1060	1230	1440	1170	683	---	1020
30	541	603	551	537	---	1070	1240	1520	1070	725	---	634
31	542	---	557	540	---	1170	---	1460	---	667	---	---
MEAN	538	555	605	546	525	894	1190	1510	1720	973	---	---

09169500 DOLORES RIVER AT BEDROCK, CO--Continued

WATER TEMPERATURE (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	19.5	13.7	6.3	1.7	.8	.0	.1	.0	.0	.0	6.9	2.2
2	17.5	12.8	5.6	.2	.7	.0	.0	.0	.0	.0	7.9	3.6
3	15.1	11.8	5.4	.2	.7	.0	.0	.0	.1	.0	6.7	4.6
4	16.4	12.6	6.0	.9	.7	.0	.0	.0	.0	.0	9.1	4.8
5	16.8	12.0	6.9	1.7	.6	.0	.0	.0	.1	.0	8.1	5.4
6	15.7	10.1	7.3	2.9	.6	.0	.0	.0	.1	.0	6.2	5.0
7	16.6	10.8	6.8	2.8	.6	.0	.0	.0	.0	.0	9.8	4.3
8	16.3	9.8	5.8	1.7	.4	.0	.0	.0	.1	.0	10.3	4.5
9	16.3	9.7	6.2	1.7	.1	.0	.0	.0	.1	.0	9.5	6.6
10	16.4	10.0	6.7	1.8	.3	.0	.0	.0	.1	.0	11.3	7.8
11	16.1	9.9	7.2	2.3	.4	.0	.0	.0	.2	.0	11.0	7.9
12	16.1	9.6	7.1	2.3	.4	.0	.0	.0	.1	.0	7.8	5.1
13	15.1	9.7	7.1	2.6	.2	.0	.0	.0	.3	.0	5.8	3.9
14	15.7	10.8	8.1	2.2	.4	.0	.1	.0	.0	.0	7.0	1.1
15	15.5	11.4	6.1	2.1	.0	.0	.0	.0	.0	.0	7.5	3.1
16	15.3	12.2	5.5	1.4	.2	.0	.0	.0	.0	.0	9.3	2.4
17	14.7	9.6	4.4	1.1	.1	.0	.0	.0	.0	.0	9.1	4.1
18	13.3	7.8	4.5	.7	.2	.0	.0	.0	.3	.0	12.3	5.4
19	12.7	6.9	4.9	.7	.2	.0	.0	.0	.3	.0	13.0	6.3
20	10.9	6.5	5.0	1.0	.1	.0	.0	.0	.5	.0	12.4	8.3
21	11.9	8.4	6.0	2.0	.2	.0	.0	.0	2.6	.0	15.0	9.4
22	14.0	9.9	5.4	1.2	.2	.0	.0	.0	3.5	.0	14.5	8.7
23	14.5	9.5	5.2	1.3	.2	.0	.0	.0	4.8	.0	16.2	11.1
24	14.0	8.6	4.8	1.9	.2	.0	.0	.0	5.1	.0	15.6	9.5
25	11.1	8.7	6.3	3.1	.1	.0	.0	.0	5.3	.0	15.1	9.6
26	11.4	7.8	6.4	4.4	.0	.0	.0	.0	5.6	.0	15.6	10.1
27	10.9	5.8	4.6	1.7	.0	.0	.0	.0	5.7	.5	15.1	11.5
28	8.5	5.1	2.9	.0	.0	.0	.0	.0	6.5	.6	12.9	10.2
29	7.3	2.7	.7	.0	.0	.0	.0	.0	---	---	12.1	9.2
30	7.0	1.6	.9	.0	.1	.0	.0	.0	---	---	11.7	9.4
31	6.5	1.0	---	---	.1	.0	.0	.0	---	---	15.2	8.3
MONTH	19.5	1.0	8.1	.0	.8	.0	.1	.0	6.5	.0	16.2	1.1
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	15.6	9.8	11.0	9.2	18.3	13.8	29.6	22.1	24.1	19.0	---	---
2	17.0	10.2	16.4	8.6	20.6	11.2	28.7	23.4	23.6	19.0	---	---
3	18.4	12.3	18.5	11.7	23.7	14.5	25.9	23.1	24.6	18.1	---	---
4	18.2	12.3	17.1	12.8	24.9	17.1	27.7	21.1	25.6	19.0	---	---
5	15.8	12.0	21.0	12.2	25.2	17.0	27.2	22.0	25.8	19.5	---	---
6	17.4	10.5	21.9	14.1	25.6	16.5	27.3	21.0	26.5	19.0	22.6	19.4
7	14.5	10.9	19.7	14.9	27.3	16.9	26.0	22.3	26.9	19.7	24.4	18.3
8	15.5	10.9	19.1	13.9	28.9	18.0	24.0	21.2	---	---	24.4	19.3
9	14.5	10.5	19.1	10.1	24.9	19.7	25.8	21.0	---	---	22.2	18.2
10	17.3	10.1	20.3	12.9	21.7	19.1	26.5	21.0	---	---	23.4	17.3
11	17.1	11.5	18.9	13.5	24.6	17.6	29.0	21.6	---	---	23.7	17.1
12	18.2	11.9	19.2	13.9	24.3	19.0	29.7	21.8	---	---	24.4	17.4
13	17.7	12.9	19.4	13.5	24.5	16.3	28.0	22.0	---	---	24.9	18.1
14	19.4	12.5	20.7	15.0	24.0	15.5	27.8	22.5	---	---	24.5	18.1
15	20.1	14.0	18.9	15.3	23.0	15.7	26.2	22.0	---	---	24.2	18.5
16	19.6	13.9	20.2	13.5	24.8	13.9	27.0	20.6	---	---	21.7	19.1
17	16.1	13.3	20.7	13.6	26.3	15.2	27.1	21.3	---	---	20.4	17.4
18	14.3	11.9	19.5	14.3	25.9	16.7	26.3	22.0	---	---	17.9	14.9
19	18.4	11.6	19.0	13.4	27.3	16.2	27.6	21.0	---	---	18.1	13.5
20	20.6	13.0	20.9	13.6	29.1	16.8	29.0	22.5	---	---	15.8	13.9
21	18.1	14.7	22.8	14.6	30.6	17.1	26.7	21.6	---	---	19.0	13.4
22	16.8	13.5	23.3	16.6	28.4	19.0	26.7	20.5	---	---	21.0	14.6
23	17.3	12.6	23.4	16.7	28.6	19.8	24.8	20.6	---	---	19.0	16.5
24	15.6	12.7	21.7	16.0	28.6	20.2	25.4	20.7	---	---	21.5	16.3
25	16.0	11.3	22.4	14.0	27.8	22.1	25.9	20.7	---	---	21.7	16.3
26	18.1	11.2	19.9	15.2	27.2	21.6	27.1	19.9	---	---	21.2	16.3
27	16.6	11.4	22.5	15.0	27.1	21.3	26.7	20.0	---	---	18.8	15.8
28	17.9	12.3	19.4	16.3	27.5	20.4	25.9	19.6	---	---	17.5	15.3
29	14.8	10.6	18.8	14.7	27.6	20.7	25.1	20.0	---	---	18.4	13.8
30	12.2	9.0	19.3	14.5	27.5	21.8	25.6	19.3	---	---	18.7	11.3
31	---	---	20.1	14.0	---	---	24.2	19.3	---	---	---	---
MONTH	20.6	9.0	23.4	8.6	30.6	11.2	29.7	19.3	---	---	---	---

DOLORES RIVER BASIN

09170800 WEST PARADOX CREEK ABOVE PARADOX, CO

WATER-QUALITY RECORDS

LOCATION.-- Latitude 38°19'54", longitude 108°53'59", in NE¼NW¼ sec.18, T.47 N, R.18 W, Montrose County. Site is 1000 ft downstream from former surface water station and 1.3 mi northwest of Bedrock, 2.6 mi upstream from mouth.

DRAINAGE AREA.-- 53.3 mi²

PERIOD OF RECORD.--Chemical analyses: August 1987 to current year.

REMARKS.-- Natural flow affected by water imported from Rock Creek through Buckeye Reservoir. Diversion for irrigation of about 2,500 acres.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	HARDNESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO
OCT 02...	1130	1660	8.3	12.0	850	190	92	52	0.8
NOV 14...	1100	1140	8.5	5.0	580	120	67	34	0.6
JAN 02...	1100	925	8.4	0.0	460	100	52	26	0.5
MAR 06...	1130	2140	8.2	5.5	1100	210	150	74	1.0

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT 02...	3.9	197	630	46	0.4	12	1140	1.56	<0.10
NOV 14...	2.4	216	400	26	0.4	10	792	1.08	0.58
JAN 02...	1.9	215	270	20	0.3	11	613	0.83	0.72
MAR 06...	4.5	242	860	67	0.3	11	1520	2.07	0.40

LOCATION.--Lat 38°21'29", long 108°49'54", in SW₁NE₁ sec.2, T.47 N., R.18 W., Montrose County, Hydrologic Unit 14030002, on right bank 2.5 mi downstream from West Paradox Creek and 4.3 mi northeast of Bedrock.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,910 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Feb. 1, 1972, at site 400 ft upstream at datum 1.02 ft, higher.

AVERAGE DISCHARGE.--12 years (water years 1972-83), 502 ft³/s; 363,700 acre-ft/yr, prior to completion of McPhee Dam; 7 years (water years 1984-90), 429 ft³/s; 310,800 acre-ft/yr, subsequent to completion of McPhee Dam. The figure published in the 1989 report was in error; the correct figure is 6 years, 492 ft³/s, 356,400 acre-ft/yr.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1970, reached a stage of 11.25 ft, site and datum in use prior to Feb. 1, 1972 (discharge, 5,710 ft³/s), by slope-area measurement at site 1,400 ft upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 778 ft³/s at 0700 Sept. 6, gage height, 5.66 ft; minimum daily, 7.1 ft³/s, June 21.

REVISIONS.--Revised figures of discharge for the water year 1989, superseding those published in the report for 1989 are given below.

EXTREMES FOR WATER YEAR 1989.--Maximum discharge, 1,000 ft³/s at 0030 Apr. 21, gage height, 6.10 ft; minimum daily 29. ft³/s, Sept. 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	103	90	75	98	162	227	633	80	60	90	58
2	79	103	93	85	95	148	262	631	167	57	78	59
3	79	104	95	90	90	158	325	623	178	56	101	59
4	78	103	94	95	85	161	315	615	177	56	86	58
5	83	102	91	95	80	146	494	608	132	56	72	60
6	88	103	90	95	80	128	510	608	126	59	75	60
7	133	104	90	90	77	125	490	608	123	58	68	59
8	73	105	90	85	76	128	521	612	122	58	65	58
9	70	105	87	84	82	139	689	618	91	59	63	57
10	70	103	83	74	92	204	751	622	76	59	63	57
11	90	122	85	80	106	265	904	624	75	60	64	56
12	92	128	85	80	115	369	993	624	76	62	70	58
13	94	137	85	80	111	427	988	627	81	67	64	59
14	95	124	85	80	111	443	992	628	104	68	62	55
15	95	121	85	80	107	600	988	623	90	64	65	37
16	96	157	85	81	107	466	978	501	81	61	64	29
17	96	150	85	85	109	437	977	261	76	61	62	29
18	96	124	85	87	114	561	982	233	73	59	67	39
19	97	116	85	82	122	489	1010	208	72	58	112	54
20	96	115	85	83	139	523	1000	156	70	59	119	63
21	94	112	85	87	133	518	997	147	67	59	97	61
22	96	104	87	91	122	369	997	143	67	58	86	84
23	97	101	88	93	122	295	999	139	67	61	91	67
24	98	102	64	95	133	335	995	134	68	63	69	64
25	98	103	62	97	151	374	992	121	66	66	64	63
26	100	104	65	101	166	360	991	100	60	104	62	62
27	100	101	65	101	183	331	880	96	60	142	61	63
28	101	83	65	102	189	338	656	93	60	136	55	63
29	100	85	65	97	---	304	646	88	60	166	54	61
30	101	74	63	96	---	272	639	82	59	195	54	61
31	102	---	67	95	---	257	---	79	---	146	54	---
TOTAL	2864	3298	2529	2741	3195	9832	23188	11885	2704	2393	2257	1713
MEAN	92.4	110	81.6	88.4	114	317	773	383	90.1	77.2	72.8	57.1
MAX	133	157	95	102	189	600	1010	633	178	195	119	84
MIN	70	74	62	74	76	125	227	79	59	56	54	29
AC-FT	5680	6540	5020	5440	6340	19500	45990	23570	5360	4750	4480	3400
CAL YR 1988	TOTAL 74917		MEAN 205	MAX 1360	MIN 61	AC-FT 148600						
WTR YR 1989	TOTAL 68599		MEAN 188	MAX 1010	MIN 29	AC-FT 136100						

DOLORES RIVER BASIN

09171100 DOLORES RIVER NEAR BEDROCK, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	75	57	78	85	104	26	28	27	28	31	30
2	60	75	72	82	85	101	28	35	24	29	32	34
3	59	75	77	86	85	99	29	37	19	30	34	32
4	59	76	79	81	80	96	29	37	17	30	34	76
5	61	77	82	72	80	87	29	43	15	39	33	106
6	63	77	85	68	80	74	29	42	13	37	33	339
7	69	77	85	58	85	61	29	35	11	42	31	139
8	66	76	73	65	85	55	30	28	8.8	58	31	64
9	68	77	75	80	90	52	30	22	12	94	32	43
10	69	77	74	75	91	43	31	19	13	165	31	47
11	69	78	68	80	96	39	30	17	15	66	30	36
12	69	79	63	80	100	38	29	16	17	47	30	33
13	69	80	58	80	107	38	27	19	14	39	31	32
14	69	79	61	80	109	37	28	27	13	37	42	28
15	69	78	71	90	80	39	26	29	12	41	109	28
16	77	78	80	90	77	36	25	27	12	39	93	23
17	76	78	85	85	86	34	24	25	12	44	137	26
18	72	79	87	85	94	32	21	29	11	43	77	40
19	72	80	82	85	97	31	27	34	10	40	63	105
20	71	79	73	80	108	31	27	31	9.6	52	58	92
21	72	80	76	80	99	31	26	30	7.1	36	54	68
22	74	80	72	80	95	32	26	34	9.8	33	42	51
23	74	81	79	77	99	31	28	34	13	32	40	43
24	74	81	80	73	102	26	28	30	13	34	36	32
25	74	82	81	81	107	29	29	32	22	35	35	29
26	76	81	80	80	108	28	24	35	25	35	34	26
27	75	80	75	80	109	27	23	36	27	30	32	25
28	75	80	75	81	107	27	25	36	27	37	31	27
29	74	73	80	80	---	26	28	35	26	48	30	74
30	72	61	80	86	---	30	27	32	26	41	30	83
31	74	---	75	86	---	31	---	28	---	32	30	---
TOTAL	2162	2329	2340	2464	2626	1445	818	942	481.3	1393	1386	1811
MEAN	69.7	77.6	75.5	79.5	93.8	46.6	27.3	30.4	16.0	44.9	44.7	60.4
MAX	77	82	87	90	109	104	31	43	27	165	137	339
MIN	59	61	57	58	77	26	21	16	7.1	28	30	23
AC-FT	4290	4620	4640	4890	5210	2870	1620	1870	955	2760	2750	3590

CAL YR 1989 TOTAL 66739 MEAN 183 MAX 1010 MIN 29 AC-FT 132400
WTR YR 1990 TOTAL 20197.3 MEAN 55.3 MAX 339 MIN 7.1 AC-FT 40060

09171100 DOLORES RIVER NEAR BEDROCK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1987 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1987 to current year.

WATER TEMPERATURE: December 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1987.

REMARKS.--Daily maximum and minimum specific conductance data available in district office. Interruptions in daily record are the result of severe probe fouling or instrument malfunctions. Maximum specific conductance verified with sample.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 57,700 microsiemens June 22, 1990 (may have been higher June 19-22 when probe was out of water); minimum, 350 microsiemens May 9, 10, 1988.

WATER TEMPERATURES: Maximum, 33.3°C July 1, 1990; minimum, 0.0°C many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum 57,700 microsiemens June 22 (may have been higher June 19-22 when probe was out of water); minimum 534 microsiemens September 6.

WATER TEMPERATURES: Maximum, 33.3°C July 1; minimum, 0.0°C many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT										
02...	1500	62	2300	8.4	19.0	190	48	17	380	12
NOV										
14...	1400	81	3700	8.2	8.0	250	57	26	660	18
JAN										
02...	1300	104	4030	8.0	-0.5	270	63	28	710	19
MAR										
06...	1640	72	6320	8.2	6.5	370	77	42	1200	27
APR										
11...	1600	30	9850	8.5	22.0	450	85	58	1800	37
MAY										
16...	1655	29	8790	8.4	25.5	540	100	70	1700	32
JUN										
01...	1045	31	6480	8.6	15.0	550	120	61	1200	22
06...	1830	12	18100	8.6	24.5	850	160	110	3700	55
JUL										
17...	1630	46	2550	8.5	27.0	250	67	21	410	11
AUG										
09...	1000	32	2870	8.4	21.5	220	52	21	480	14
SEP										
05...	1500	82	1130	8.3	27.0	190	53	13	150	5
06...	1200	468	657	8.2	23.0	120	36	7.0	87	3

09171100 DOLORES RIVER NEAR BEDROCK, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT 02...	19	119	66	580	0.1	3.0	1180	1.61	199	<0.1
NOV 14...	30	128	100	1100	0.1	4.0	2050	2.79	449	<0.1
JAN 02...	40	138	110	1100	0.1	5.0	2140	2.91	601	<0.1
MAR 06...	25	130	160	1800	0.2	4.0	3390	4.61	658	<0.1
APR 11...	88	160	260	3200	<0.1	3.1	5590	7.60	456	<0.1
MAY 16...	85	150	500	2700	0.9	2.8	5250	7.14	408	<0.1
JUN 01...	54	146	160	2300	<0.1	5.0	3990	5.42	334	<0.1
JUN 06...	160	157	650	6200	<0.1	4.3	11100	15.1	374	<0.1
JUL 17...	20	131	130	640	0.3	5.9	1370	1.87	169	0.1
AUG 09...	24	129	81	780	0.3	2.4	1520	2.06	130	<0.1
SEP 05...	9.7	130	70	250	<0.1	3.1	627	0.85	140	<0.1
SEP 06...	8.3	114	45	110	0.2	6.6	371	0.50	468	0.50

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	3200	5850	---	3410	3270	10900	10200	6440	6150	2790	2670
2	---	3300	5010	---	3360	3730	10700	7750	6920	5910	2790	2310
3	2250	3390	3990	3320	3150	3980	10200	6710	7560	5690	2850	2490
4	2220	3540	3840	3150	3610	4210	10700	6260	11200	5040	2810	1290
5	2220	3470	3670	3770	3620	4870	11400	5490	14400	4160	2770	956
6	2090	3410	2870	3950	3350	6020	10500	5960	17600	4280	2850	673
7	1940	3350	2560	4610	3120	7630	11000	7360	24800	3740	3050	741
8	2160	3180	3730	4780	2950	8250	10500	8840	23400	3320	3090	1130
9	2250	3140	4150	3550	3060	8460	9540	11700	17900	2440	2940	---
10	2350	3250	4190	2910	3030	10800	9270	16200	15300	1830	2670	---
11	2440	3410	3960	2580	2970	11900	9440	20900	13200	2250	2360	---
12	2450	3540	4190	2440	3130	11300	9920	19800	10700	2780	2290	---
13	2470	3600	5990	2400	2950	10800	10900	15100	13500	3470	2130	7720
14	2580	3700	4960	2360	2780	10400	11000	8710	14600	3610	1960	9660
15	2660	---	4700	2370	---	9400	11700	7540	16000	2990	1190	9230
16	2510	---	3980	2390	---	9680	12500	8420	16600	2700	1060	8720
17	2340	---	3490	2410	---	10900	12800	9800	16900	2340	1080	8180
18	2370	---	3680	2410	---	10800	15400	7850	18500	2450	---	6930
19	2520	---	3940	2550	---	11100	13600	6650	19700	2710	---	1650
20	2670	---	4380	2640	---	11200	10400	7580	---	2000	---	1210
21	2710	---	3790	2550	---	11800	10600	6820	---	2950	---	1240
22	2670	---	---	2470	---	11800	10400	6400	33200	3080	---	1860
23	2590	---	---	2720	---	12000	10100	6580	17600	3090	---	3120
24	2570	---	---	3100	---	12200	10400	7250	19200	2790	---	3760
25	2800	---	---	---	---	12300	9450	6240	13400	2930	---	4850
26	2800	---	---	---	---	12400	11100	5490	8160	2750	---	5450
27	2890	---	---	---	---	12900	12000	5410	7650	3080	---	5070
28	2910	---	---	---	---	12700	11200	5220	7320	2480	---	4710
29	3050	---	---	---	---	12700	8450	5510	7080	1660	---	2070
30	3250	6470	---	---	---	11600	9250	5770	6950	2060	---	1360
31	3290	---	---	4390	---	10100	---	6540	---	2600	3040	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.2	12.0	8.5	1.9	2.2	.0	1.3	.0	2.8	.0	9.1	1.3
2	18.5	11.0	8.1	.3	1.8	.0	1.1	.0	3.9	.0	9.8	2.4
3	17.0	11.7	7.9	.3	1.7	.0	2.4	.0	3.2	.0	7.1	3.7
4	17.6	12.5	8.2	1.1	2.2	.0	.1	.0	2.3	.0	10.5	4.2
5	19.5	10.7	8.9	1.6	3.0	.0	.8	.0	4.7	.0	8.6	4.4
6	18.0	8.8	9.5	3.7	3.2	.0	.7	.0	3.3	.0	6.8	4.4
7	18.5	10.5	8.8	3.2	3.2	.0	1.1	.0	2.8	.0	11.9	3.4
8	18.7	8.8	7.9	1.0	2.0	.0	.0	.0	4.8	.0	13.1	3.7
9	18.8	8.7	8.8	1.6	.2	.0	.6	.0	3.9	.0	12.3	5.6
10	18.4	9.0	9.0	1.8	.9	.0	1.4	.0	5.6	.0	13.0	6.9
11	18.4	9.0	9.6	2.3	.0	.0	2.0	.0	5.5	.0	11.9	5.8
12	18.3	8.5	9.5	2.4	.1	.0	2.2	.0	2.9	.0	8.9	3.8
13	17.4	8.8	9.3	2.6	.0	.0	2.5	.0	5.6	.0	7.7	3.2
14	17.6	10.1	8.5	2.2	.1	.0	3.8	.0	1.4	.2	10.2	.0
15	17.9	11.3	6.7	.6	.0	.0	2.0	.0	2.7	.0	11.3	1.6
16	17.7	12.3	6.3	.0	.6	.0	2.0	.0	2.0	.0	12.8	.9
17	16.4	8.9	5.0	.1	.0	.0	2.1	.0	2.1	.0	11.9	2.1
18	15.4	7.3	5.3	.0	.4	.0	.0	.0	6.6	.0	14.9	3.7
19	15.1	6.3	6.0	.0	.7	.0	.3	.0	3.5	.1	16.7	3.7
20	12.9	6.2	6.0	.0	.6	.0	3.4	.0	4.4	.0	14.9	6.2
21	14.1	7.9	7.1	1.4	1.2	.0	1.7	.0	4.9	.0	19.2	8.0
22	17.0	9.8	6.5	.0	1.4	.0	.2	.0	6.2	.0	17.3	5.6
23	17.0	9.4	6.1	.3	1.5	.0	1.6	.0	6.4	.3	17.7	9.5
24	16.3	8.4	5.0	1.4	1.6	.0	2.0	.0	6.0	.2	18.1	6.3
25	11.4	8.8	7.3	2.3	1.6	.0	1.3	.0	7.0	.4	17.4	6.7
26	13.5	7.6	6.9	3.8	.9	.0	1.8	.0	7.9	.3	17.8	7.1
27	13.2	5.5	5.5	1.1	.6	.0	2.3	.0	7.7	2.4	15.9	9.5
28	10.9	4.9	3.7	.0	.7	.0	1.5	.0	9.0	1.6	14.4	8.1
29	9.5	2.3	2.3	.0	1.5	.0	2.3	.0	---	---	14.4	7.8
30	9.3	1.5	1.7	.0	.8	.0	1.2	.0	---	---	13.4	7.7
31	9.0	.9	---	---	1.4	.0	2.1	.0	---	---	18.3	7.7
MONTH	21.2	.9	9.6	.0	3.2	.0	3.8	.0	9.0	.0	19.2	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.0	6.7	11.7	7.4	19.7	12.1	33.3	20.0	25.8	17.3	27.9	20.4
2	19.9	7.6	19.6	7.6	25.3	8.5	30.4	20.3	24.2	17.1	30.5	21.4
3	20.3	9.8	22.1	9.5	28.5	11.9	28.6	20.9	28.2	15.5	30.7	20.7
4	21.7	9.3	20.3	9.8	26.5	14.1	30.2	19.3	28.3	16.7	29.1	22.3
5	17.6	9.3	23.6	9.9	26.1	13.7	28.9	20.1	28.5	16.9	27.8	21.7
6	20.9	7.6	25.1	11.2	26.1	13.7	30.0	18.7	29.7	16.9	23.7	20.2
7	15.1	7.6	21.4	12.0	28.0	12.9	28.2	20.8	29.3	17.4	26.2	18.2
8	17.4	10.2	19.9	10.8	31.5	14.4	25.7	20.0	30.2	17.7	26.4	18.7
9	15.6	9.0	23.0	6.6	25.4	15.1	27.7	19.5	30.6	18.7	22.6	16.9
10	21.7	7.1	22.2	9.6	24.3	17.0	29.1	20.8	31.0	18.7	25.7	15.6
11	21.2	8.5	20.4	11.4	25.9	15.1	30.0	20.0	27.0	17.2	26.0	15.4
12	21.3	9.6	21.2	11.8	24.5	15.7	30.7	19.9	28.5	18.0	27.3	14.9
13	17.8	9.8	20.3	10.7	25.0	14.3	29.5	19.5	26.0	18.2	27.8	15.7
14	22.3	8.4	23.0	12.0	24.7	13.0	30.3	21.5	26.8	18.7	26.8	15.4
15	22.1	10.7	19.1	12.9	23.2	13.4	28.0	19.7	23.1	17.8	26.8	16.3
16	20.5	10.0	25.0	10.6	25.6	11.6	28.0	19.0	22.7	20.5	21.5	18.0
17	18.6	10.9	23.5	10.1	26.5	12.5	27.2	19.5	24.2	20.3	21.6	16.8
18	16.0	9.6	21.6	11.5	25.5	14.6	27.9	19.4	24.6	20.1	19.3	13.2
19	21.3	9.7	20.3	10.3	27.1	13.5	29.7	19.1	25.2	18.0	21.0	12.5
20	24.2	10.1	25.2	11.2	29.5	14.1	29.5	20.6	24.4	17.9	16.1	13.4
21	20.2	12.0	26.3	11.3	27.9	15.4	28.4	19.4	25.4	17.8	20.5	12.4
22	18.7	11.8	24.4	13.5	30.0	15.2	29.3	17.8	23.8	18.5	22.9	13.4
23	19.1	10.8	24.7	13.1	29.3	16.2	26.2	18.0	26.7	17.2	19.9	15.9
24	17.7	11.4	22.7	13.4	31.1	16.0	26.5	18.9	23.3	16.5	24.1	15.5
25	19.3	9.6	24.6	10.8	30.8	18.9	27.0	18.9	22.7	16.2	24.5	14.9
26	19.8	9.1	21.2	11.6	29.3	18.3	29.1	18.2	25.0	14.7	24.2	14.7
27	18.5	9.0	26.0	12.0	29.1	18.3	30.5	17.3	27.5	15.0	20.8	14.4
28	19.1	10.2	19.8	13.1	30.3	17.1	28.1	17.0	28.7	16.1	17.9	14.4
29	13.5	7.9	20.8	13.4	30.0	17.1	25.5	17.7	29.6	16.6	21.0	13.1
30	14.0	7.4	20.4	11.5	31.1	18.2	28.0	17.0	27.1	18.1	19.5	12.0
31	---	---	21.9	11.8	---	---	26.7	17.2	26.1	18.0	---	---
MONTH	24.2	6.7	26.3	6.6	31.5	8.5	33.3	17.0	31.0	14.7	30.7	12.0
YEAR	33.3	.0										

09172500 SAN MIGUEL RIVER NEAR PLACERVILLE, CO

LOCATION.--Lat 38°02'33", long 108°07'54", in NW¼NE¼ sec.25, T.44 N., R.12 W., San Miguel County, Hydrologic Unit 14030003, on right bank 1.5 mi downstream from Specie Creek in vicinity of mile marker 88.68 on State Highway 145 and 4.5 mi northwest of Placerville, CO.

DRAINAGE AREA.--310 mi².

PERIOD OF RECORD.--January to December 1909, September 1910 to December 1912, April 1930 to September 1934, April 1942 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Placerville," 1910-12.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,030 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1713 or 1733 for history of changes prior to Oct. 21, 1958. Oct. 22, 1958 to Mar. 4, 1986, gage located 0.8 mi upstream from present site, at different datum. Mar. 5, 1986, gage moved to present site, at present datum.

REMARKS.--Estimated daily discharges: Nov. 16-19, 23, 24, Nov. 28 to Feb. 27, Mar. 3, 4, 6 and July 19-22. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,700 acres upstream from station. One diversion from Fall Creek for irrigation of about 2,000 acres in Beaver and Saltado Creek basins. One small ditch diverts water from Leopard Creek to Uncompahgre River basin. Slight regulation by Lake Hope and Trout Lake operated by Colorado Ute Electric Association, combined capacity, 5,040 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--54 years (water years 1911-12, 1931-34, 1943-90), 235 ft³/s; 170,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s, Sept. 5, 1909 (result of failure of Trout and Middle Reservoir Dams); minimum daily, 26 ft³/s, Jan. 5, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	0200	*1,150	*4.40	No other peak greater than base discharge.			

Minimum daily, 30 ft³/s, Nov. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	87	40	46	38	36	58	121	310	238	119	77
2	55	59	44	48	36	36	59	136	295	245	125	68
3	54	56	46	48	36	40	63	178	382	270	119	65
4	77	56	46	46	36	42	69	266	645	275	115	74
5	117	52	46	44	36	44	72	265	854	272	111	103
6	71	50	48	42	36	42	64	250	895	410	105	137
7	63	48	48	40	36	37	66	245	907	343	93	156
8	62	51	48	40	36	38	70	240	893	312	78	158
9	59	51	48	42	36	55	102	229	861	324	71	143
10	57	53	48	42	36	58	69	215	948	277	64	135
11	59	52	48	42	38	60	71	213	1000	244	66	86
12	58	50	48	42	38	57	72	190	851	219	74	76
13	58	49	48	42	38	57	76	182	784	204	82	70
14	58	50	48	42	38	55	87	205	746	189	99	68
15	58	43	48	40	34	52	96	214	664	188	153	70
16	74	46	48	38	32	50	96	210	524	171	138	65
17	74	50	48	38	32	53	108	192	504	168	147	80
18	75	55	48	40	34	54	101	201	504	154	152	95
19	126	55	48	40	36	53	107	206	497	150	125	118
20	73	56	48	40	38	61	135	200	436	140	111	116
21	77	57	48	40	38	60	181	239	418	140	112	111
22	76	52	48	40	38	66	161	321	407	135	105	116
23	71	50	48	40	38	74	142	373	404	136	101	110
24	64	50	48	40	40	70	146	488	403	140	98	105
25	62	54	48	40	40	69	136	483	378	139	104	100
26	60	53	48	40	42	65	128	483	348	139	92	98
27	57	49	48	38	42	77	112	446	314	144	80	97
28	57	30	48	36	41	71	107	470	339	140	108	162
29	52	38	48	36	---	71	120	489	301	136	106	174
30	50	40	46	38	---	66	116	378	261	137	105	158
31	54	---	46	38	---	57	---	296	---	133	77	---
TOTAL	2062	1542	1466	1268	1039	1726	2990	8624	17073	6312	3235	3191
MEAN	66.5	51.4	47.3	40.9	37.1	55.7	99.7	278	569	204	104	106
MAX	126	87	48	48	42	77	181	489	1000	410	153	174
MIN	50	30	40	36	32	36	58	121	261	133	64	65
AC-FT	4090	3060	2910	2520	2060	3420	5930	17110	33860	12520	6420	6330

CAL YR 1989 TOTAL 56166 MEAN 154 MAX 660 MIN 30 AC-FT 111400
WTR YR 1990 TOTAL 50528 MEAN 138 MAX 1000 MIN 30 AC-FT 100200

09177000 SAN MIGUEL RIVER AT URAVAN, CO

LOCATION.--Lat 38°21'26", long 108°42'44", in SW¼NE¼ sec.2, T.47 N., R.17 W., Montrose County, Hydrologic Unit 14030003, on right bank 20 ft downstream from bridge on State Highway 141, 400 ft downstream from Tabeguache Creek, and 1.5 mi southeast of Uravan.

DRAINAGE AREA.--1,499 mi².

PERIOD OF RECORD.--August 1954 to September 1962, October 1973 to current year.

REVISED RECORDS.--WRD Colo. 1974: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 3, 1959, at site 0.5 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 3-8, 10, 11, Dec. 15 to Feb. 22, Aug. 1-8, 11-13. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 28,000 acres upstream from station, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--25 years (water years 1955-62, 1974-90), 384 ft³/s; 278,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,050 ft³/s, May 10, 1983, gage height, 10.14 ft, from rating curve extended above 4,100 ft³/s; minimum daily, 9.4 ft³/s, Aug. 10, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1970, reached a stage of 12.6 ft, from floodmarks, discharge, 8,910 ft³/s, by slope-area measurement at site 5.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 8	1800	*2,140	*6.40	No other peak greater than base discharge.			
Minimum daily, 16 ft ³ /s, Aug. 12.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	69	40	55	50	72	43	264	272	211	40	30
2	24	98	59	55	48	69	38	360	276	212	40	29
3	21	73	60	55	48	67	36	651	285	208	38	64
4	24	71	60	55	48	77	40	770	450	257	36	55
5	29	72	60	55	48	74	49	566	695	228	34	31
6	49	71	65	50	48	75	57	450	837	327	34	35
7	46	71	65	48	48	78	55	416	868	338	30	60
8	36	69	65	48	48	66	60	394	872	555	28	90
9	36	71	61	50	48	64	74	363	838	388	24	88
10	36	69	60	50	50	79	127	331	919	247	21	81
11	36	71	60	50	50	88	82	324	1040	208	17	71
12	36	71	50	55	55	94	75	298	944	181	16	45
13	35	69	47	55	55	89	75	271	777	156	17	35
14	37	66	45	55	50	85	75	264	680	211	20	27
15	40	61	55	55	48	79	79	282	602	187	89	24
16	58	53	60	55	46	74	96	286	453	136	128	23
17	100	32	65	50	46	71	102	274	399	121	91	24
18	85	29	65	50	50	75	120	258	390	114	92	103
19	98	29	60	50	55	77	206	252	439	109	88	178
20	143	38	60	50	55	77	185	246	395	85	69	83
21	93	65	60	50	55	75	383	246	363	71	60	79
22	98	71	60	55	55	73	526	287	358	64	50	74
23	92	67	60	55	61	48	293	353	338	57	45	83
24	85	69	60	50	64	38	273	438	338	52	41	92
25	81	71	60	50	69	42	308	502	338	64	35	81
26	79	71	60	48	69	42	265	484	307	75	33	76
27	79	71	60	48	69	42	223	451	275	52	32	74
28	75	66	60	48	79	46	181	445	273	60	29	72
29	75	47	60	48	---	49	202	474	261	53	31	151
30	71	35	55	50	---	54	248	426	236	53	35	143
31	67	---	55	50	---	54	---	320	---	51	31	---
TOTAL	1888	1886	1812	1598	1515	2093	4576	11746	15518	5131	1374	2101
MEAN	60.9	62.9	58.5	51.5	54.1	67.5	153	379	517	166	44.3	70.0
MAX	143	98	65	55	79	94	526	770	1040	555	128	178
MIN	21	29	40	48	46	38	36	246	236	51	16	23
AC-FT	3740	3740	3590	3170	3010	4150	9080	23300	30780	10180	2730	4170

CAL YR 1989 TOTAL 63068 MEAN 173 MAX 709 MIN 21 AC-FT 125100
WTR YR 1990 TOTAL 51238 MEAN 140 MAX 1040 MIN 16 AC-FT 101600

09237450 YAMPA RIVER ABOVE STAGECOACH RESERVOIR, CO

LOCATION.--Lat 40°16'09", long 106°52'49", in SW¼SW¼ sec. 36, T. 4 N., R. 85 W., Routt County, Hydrologic Unit 14050001, on left bank, 1.4 mi downstream from Jack Creek and 4.0 mi east of Oak Creek, Co.

DRAINAGE AREA.--257 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,240 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 16-19, 24, Nov. 28 to Feb. 8, Feb. 12-16, and Feb. 19 to Mar. 23. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 12,000 acres upstream from station. Natural flow of stream affected by 2 diversions for irrigation to Egeria Creek into Colorado River basin and by storage in Stillwater, Yampa and Yamcolo Reservoirs (total capacity, 15,820 acre-ft).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 274 ft³/s, Apr. 8, 1989, gage height, 3.57 ft; minimum daily, 14 ft³/s, Jan. 24-26, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 206 ft³/s at 0700 July 25, gage height, 3.22 ft; minimum daily, 14 ft³/s, Jan. 24-26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	36	34	23	21	35	75	36	46	47	83	41
2	31	30	34	24	21	34	75	34	53	48	81	34
3	30	56	34	24	20	36	80	32	51	52	69	39
4	32	45	34	24	20	35	77	28	49	108	62	43
5	33	43	34	24	20	34	66	29	58	91	63	33
6	33	44	33	24	25	36	62	31	62	72	61	32
7	35	42	33	24	35	38	59	32	58	86	57	30
8	35	42	34	24	40	40	57	36	48	106	58	28
9	35	42	33	24	44	45	60	37	48	115	54	28
10	35	41	33	24	42	48	58	34	50	100	52	31
11	36	44	32	26	43	50	51	29	50	79	52	26
12	32	44	31	28	43	50	50	38	76	77	57	28
13	37	43	31	28	40	55	49	46	93	74	58	29
14	39	43	30	30	40	60	46	36	67	78	51	22
15	42	46	30	29	40	62	44	32	57	80	51	25
16	46	43	29	25	40	65	44	51	57	76	52	22
17	44	42	29	20	39	70	43	49	56	78	57	28
18	41	42	28	19	44	70	38	41	53	76	60	34
19	41	42	28	22	40	75	36	41	46	81	55	33
20	41	42	27	20	40	75	36	42	52	81	49	26
21	43	39	27	18	38	77	37	42	53	113	49	29
22	43	41	26	16	38	79	39	41	47	91	47	28
23	40	44	26	15	37	82	37	40	44	78	50	32
24	46	44	25	14	36	86	38	41	41	84	53	31
25	42	43	25	14	35	83	39	45	41	139	46	41
26	45	37	24	14	34	83	50	43	44	106	43	43
27	43	40	24	15	35	88	39	35	44	93	41	31
28	44	40	24	16	35	87	36	35	42	84	40	31
29	39	38	24	17	---	74	32	36	42	80	29	31
30	40	36	24	18	---	76	38	53	42	74	25	27
31	34	---	24	19	---	70	---	47	---	75	27	---
TOTAL	1188	1254	904	662	985	1898	1491	1192	1570	2622	1632	936
MEAN	38.3	41.8	29.2	21.4	35.2	61.2	49.7	38.5	52.3	84.6	52.6	31.2
MAX	46	56	34	30	44	88	80	53	93	139	83	43
MIN	30	30	24	14	20	34	32	28	41	47	25	22
AC-FT	2360	2490	1790	1310	1950	3760	2960	2360	3110	5200	3240	1860

CAL YR 1989 TOTAL 22903 MEAN 62.7 MAX 232 MIN 24 AC-FT 45430
WTR YR 1990 TOTAL 16334 MEAN 44.8 MAX 139 MIN 14 AC-FT 32400

09237450 YAMPA RIVER ABOVE STAGECOACH RESERVOIR, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	OXYGEN DEMAND, BIOCHEM 20 DAY, 20 DEG (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI, KF AGAR (COLS. PER 100 ML)
OCT 31...	1315	45	388	8.6	2.0	11	11	0.8	2.0	21	33
DEC 06...	1045	35	400	8.3	0.0	2.7	11	0.8	1.9	K17	K26
FEB 21...	1500	E35	432	7.9	0.0	3.9	10.0	0.9	2.2	K11	20
APR 24...	1345	37	470	8.4	10.5	--	8.3	--	--	--	--
MAY 23...	1810	40	496	8.7	18.5	3.6	7.1	1.5	4.2	130	K17
JUN 26...	0845	44	526	8.4	15.0	--	7.8	--	--	--	--
JUL 30...	1730	74	467	8.6	20.0	--	7.6	1.9	3.9	--	--
AUG 29...	1450	25	403	8.7	18.5	5.1	8.8	1.7	4.4	K1	51

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 31...	17	<0.01	<0.1	<0.1	<0.01	0.50	0.20	0.06	<0.01	0.02
DEC 06...	7	<0.01	0.10	0.13	0.02	0.40	<0.2	0.04	0.02	0.02
FEB 21...	7	<0.01	0.2	<0.1	0.01	0.40	<0.2	0.06	0.02	<0.01
APR 24...	19	<0.01	<0.1	<0.1	<0.01	0.70	0.40	0.05	0.01	<0.01
MAY 23...	67	<0.01	<0.1	<0.1	<0.01	0.60	0.30	0.06	0.03	0.02
JUN 26...	32	<0.01	<0.1	<0.1	<0.01	0.90	0.70	0.09	0.06	0.03
JUL 30...	14	<0.01	<0.1	<0.1	0.02	0.30	0.30	0.06	0.04	0.02
AUG 29...	9	0.01	<0.1	<0.1	<0.01	0.30	0.50	0.05	0.03	<0.01

DATE	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CaCO3)
OCT 31...	190	51	16	10	0.3	1.8	174
MAY 23...	240	62	20	13	0.4	2.7	198

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT 31...	42	1.8	0.1	20	247	0.34	30.0
MAY 23...	75	4.8	0.3	20	317	0.43	34.2

K BASED ON NON-IDEAL COLONY COUNT.

GREEN RIVER BASIN

09237450 YAMPA RIVER ABOVE STAGECOACH RESERVOIR, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 31...	680	<1	<1	<100	<10	<1	<1	1	2	1300
MAY 23...	200	<1	1	<100	<10	<1	<1	1	2	470

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 31...	1	20	70	<0.1	1	3	<1	<1	300	10
MAY 23...	2	20	50	<0.1	1	3	<1	<1	340	<10

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 03...	1400	31	480	13.5	APR 12...	1000	51	501	8.0
NOV 02...	1330	37	465	2.0	19...	1120	35	460	12.0
JAN 04...	1040	24	465	1.0	MAY 17...	1000	44	523	10.0
FEB 05...	1015	14	411	0.5	JUN 11...	1020	51	--	17.5
MAR 26...	1145	61	609	9.0	JUL 09...	1010	110	555	18.0
					AUG 06...	1250	60	500	20.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SED- IMENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 31...	1315	45	41	5.0	62
DEC 06...	1045	35	48	4.5	--
FEB 21...	1500	E35	47	--	--
APR 24...	1345	37	2340	236	100
MAY 23...	1810	40	41	4.4	77
JUN 26...	0845	44	100	12	39
JUL 30...	1730	74	54	11	59
AUG 29...	1450	25	59	4.0	--

E ESTIMATED.

09237500 YAMPA RIVER BELOW STAGECOACH RESERVOIR, CO
(Formerly published as Yampa River near Oak Creek)

LOCATION.--Lat 40°17'15", long 106°49'33", in SE¼NE¼ sec. 29, T. 4 N., R. 84 W., Routt County, Hydrologic Unit 1405001, on left bank, 1.0 mi upstream from Morrison Creek and 6.5 mi east of Oak Creek, Co.

DRAINAGE AREA.--278 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1939 to September 1944 (monthly discharge only for some periods, published in WSP 1313), October 1956 to September 1972, October 1984 to current year.

REVISED RECORDS.--WDR CO-89-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,050 ft above National Geodetic Vertical Datum of 1929, from topographic map. Sept. 1939 to Nov. 15, 1939, nonrecording gage, Nov. 16 1939, to Sept 1944 and Oct. 1956 to Sept 1972, water-stage recorder at site 0.5 mi upstream, at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since Dec. 20 1988, by Stagecoach Reservoir (capacity 33,275 acre-ft), 0.3 mi upstream. Diversions for irrigation of about 12,000 acres upstream from station. Natural flow of stream affected by 2 diversions for irrigation to Egeria Creek into Colorado River basin and by storage in Stillwater, Yampa and Yamcolo Reservoirs (total capacity, 15,820 acre-ft).

AVERAGE DISCHARGE.--25 years (water years 1940-44, 1957-72, 1985-88), 89.4 ft³/s; 64,770 acre-ft/yr, prior to completion of Stagecoach Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft³/s, Apr. 16, 1962, gage height, 7.56 ft, from rating curve extended above 570 ft³/s, site and datum then in use; maximum gage height, 8.08 ft, Mar. 8, 1987, (backwater from ice); minimum daily discharge, 8.9 ft³/s, May 22, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 102 ft³/s at 0730 Aug. 16, gage height, 2.38 ft; minimum daily, 20 ft³/s, Nov. 5, and Dec. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	36	64	44	45	58	45	42	46	44	44	35
2	34	34	64	44	44	48	45	43	46	45	44	33
3	33	28	65	44	44	40	62	41	47	45	44	26
4	32	22	66	43	44	40	73	41	48	45	41	24
5	33	20	67	43	44	53	58	41	48	46	41	29
6	33	36	56	44	44	58	43	41	49	47	40	40
7	32	46	46	44	60	58	46	43	50	47	38	32
8	30	37	45	43	63	61	44	44	50	47	37	35
9	41	45	46	43	61	52	47	44	50	42	37	36
10	43	54	46	44	62	43	45	49	51	46	35	34
11	47	55	45	49	63	41	45	45	51	47	35	34
12	38	54	45	43	63	55	45	46	50	47	34	34
13	40	54	45	43	63	64	44	46	49	50	29	34
14	39	54	45	44	62	63	44	45	49	50	22	34
15	48	59	45	44	61	62	45	46	46	50	29	34
16	35	63	45	43	54	53	45	46	43	50	43	33
17	41	64	45	43	42	42	46	45	42	49	37	32
18	51	63	45	43	42	43	46	45	41	49	37	23
19	53	66	48	43	53	55	44	44	41	49	38	24
20	48	65	45	43	59	63	44	44	47	49	38	31
21	28	54	45	42	59	64	43	44	43	49	38	32
22	28	47	44	43	60	61	44	44	41	48	39	33
23	28	43	49	42	49	51	45	44	41	46	40	33
24	28	56	49	41	40	43	44	44	40	42	40	30
25	41	53	48	44	40	42	44	44	41	36	40	27
26	61	59	38	44	52	62	44	44	41	43	39	33
27	76	62	20	44	58	67	44	44	41	44	39	33
28	58	62	33	44	58	69	43	45	42	43	38	32
29	46	62	44	44	---	75	42	45	43	43	35	32
30	51	63	44	45	---	57	42	45	43	45	35	32
31	43	---	44	44	---	45	---	46	---	44	35	---
TOTAL	1276	1516	1476	1351	1489	1688	1391	1370	1360	1427	1161	954
MEAN	41.2	50.5	47.6	43.6	53.2	54.5	46.4	44.2	45.3	46.0	37.5	31.8
MAX	76	66	67	49	63	75	73	49	51	50	44	40
MIN	28	20	20	41	40	40	42	41	40	36	22	23
AC-FT	2530	3010	2930	2680	2950	3350	2760	2720	2700	2830	2300	1890

CAL YR 1989 TOTAL 11697.8 MEAN 32.0 MAX 85 MIN 9.4 AC-FT 23200
WTR YR 1990 TOTAL 16459 MEAN 45.1 MAX 76 MIN 20 AC-FT 32650

09237500 YAMPA RIVER BELOW STAGECOACH RESERVOIR, CO--Continued
(formerly published as Yampa River near Oak Creek)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1984 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: May 1985 to September 1988.

INSTRUMENTATION.--Automatic pumping sediment sampler May 1985 to September 1988.

REMARKS.--This station is part of a hydrologic investigation of the new reservoir.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	OXYGEN DEMAND, BIOCHEM 20 DAY, 20 DEG (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 31...	1100	46	502	8.0	9.0	1.8	5.7	1.4	6.1	<1	<1
DEC 06...	0835	75	490	8.2	2.5	0.9	8.4	1.1	4.9	K2	K1
FEB 21...	1135	75	517	7.9	3.5	1.0	4.7	1.1	4.8	<1	<1
APR 24...	1145	44	500	8.0	4.5	--	6.8	--	--	--	--
MAY 23...	1530	44	474	8.4	12.5	1.0	8.7	1.2	4.0	<1	K2
JUN 25...	1605	37	499	8.1	7.0	--	8.4	--	--	--	--
JUL 30...	1630	45	496	8.2	8.0	--	4.5	2.5	>7.0	--	--
AUG 29...	0800	41	500	8.0	9.5	2.1	1.2	3.3	7.1	<1	K3

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 31...	1	<0.01	<0.1	<0.1	0.55	1.1	1.2	0.16	0.15	0.15
DEC 06...	7	<0.01	0.10	<0.1	0.48	1.0	1.0	0.12	0.11	0.10
FEB 21...	<1	<0.01	<0.1	<0.1	0.50	0.80	<1.0	0.23	0.18	<0.18
APR 24...	17	0.01	0.20	0.20	0.19	0.70	0.70	0.14	0.13	0.09
MAY 23...	42	<0.01	<0.1	<0.1	<0.01	0.90	0.30	0.04	0.06	<0.01
JUN 25...	5	0.02	<0.1	<0.1	0.17	1.3	0.80	0.17	0.15	0.14
JUL 30...	1	<0.01	<0.1	<0.1	0.57	1.3	1.0	0.27	0.22	0.21
AUG 29...	4	<0.01	<0.1	<0.1	0.98	1.5	1.3	0.30	0.24	0.21

DATE	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CaCO3)
OCT 31...	230	58	20	14	0.4	3.2	201
MAY 23...	230	58	20	13	0.4	3.1	187

K BASED ON NON-IDEAL COLONY COUNT.

09237500 YAMPA RIVER BELOW STAGECOACH RESERVOIR, CO--Continued
(formerly published as Yampa River near Oak Creek)

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 31...	69	2.9	0.2	19	308	0.42	38.3
MAY 23...	69	4.4	0.1	15	295	0.40	35.0

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 31...	90	<1	1	<100	<10	<1	<1	<1	1	280
MAY 23...	70	<1	1	<100	<10	<1	<1	<1	4	170

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 31...	<1	20	200	<0.1	1	1	<1	<1	400	<10
MAY 23...	3	20	40	<0.1	2	2	<1	<1	300	<10

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 03...	1235	35	515	14.5	MAY 17...	1135	41	467	12.0
25...	1155	43	525	10.5	JUN 11...	1120	50	--	12.0
DEC 13...	0945	43	555	3.5	JUL 09...	1100	48	502	10.5
FEB 05...	1230	47	537	5.0	AUG 06...	1110	40	--	12.0
MAR 05...	1100	56	528	6.0	SEP 10...	1255	37	534	--
APR 12...	1105	41	554	5.5					
19...	1200	43	524	7.5					

GREEN RIVER BASIN

09237500 YAMPA RIVER BELOW STAGECOACH RESERVOIR, CO--Continued
(formerly published as Yampa River near Oak Creek)

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
31...	1100	46	5	0.62	52
DEC					
06...	0835	75	34	6.9	--
FEB					
21...	1135	75	76	15	--
APR					
24...	1145	44	4	0.47	44
MAY					
23...	1530	44	21	2.5	45
JUN					
25...	1605	37	3	0.28	--
JUL					
30...	1630	45	2	0.23	--
AUG					
29...	0800	41	3	0.30	--

09238705 LONG LAKE INLET NEAR BUFFALO PASS, CO

LOCATION.--Lat 40°28'25", Long 106°40'46", in SE¼NW¼ sec. 23, T.6N., R.83W., Routt County, Hydrologic Unit 14050001, on left bank 0.1 mi above Long Lake, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--0.71 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,875 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: June 7-8. Records fair except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62 ft³/s, June 16, 1988, gage height, 2.99 ft; no flow, Jan. 24-29, March 14-19, 26-30, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 28 ft³/s, June 8; minimum daily, 0.01 ft³/s, Jan. 21 to Mar. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.06	.03	.02	.01	.01	.02	.22	7.8	5.0	.20	.13
2	.05	.06	.03	.02	.01	.01	.02	.32	5.9	4.6	.17	.20
3	.05	.05	.03	.02	.01	.01	.03	.54	5.0	4.9	.15	.21
4	.34	.05	.03	.02	.01	.01	.06	.63	11	3.2	.13	.11
5	.17	.05	.03	.02	.01	.01	.08	.60	18	1.9	.12	.10
6	.11	.05	.03	.02	.01	.01	.07	1.1	23	1.7	.13	.12
7	.07	.05	.03	.02	.01	.01	.07	1.8	25	1.5	.13	.10
8	.06	.05	.03	.02	.01	.01	.07	1.6	28	3.0	.15	.10
9	.06	.05	.03	.02	.01	.01	.07	1.1	23	2.2	.15	.10
10	.05	.05	.03	.02	.01	.01	.06	.85	23	1.4	.12	.10
11	.05	.05	.03	.02	.01	.01	.05	1.2	25	1.1	.11	.10
12	.05	.05	.03	.02	.01	.01	.05	1.1	22	.91	.19	.11
13	.04	.05	.03	.02	.01	.01	.05	.90	18	.88	.13	.11
14	.04	.05	.03	.02	.01	.01	.05	.69	25	.97	.12	.10
15	.05	.05	.03	.02	.01	.01	.10	.62	21	.77	.26	.11
16	.06	.04	.03	.02	.01	.01	.42	.55	16	.60	.23	.11
17	.06	.04	.03	.02	.01	.01	.56	.49	18	.59	1.0	.26
18	.07	.04	.03	.02	.01	.01	.66	.55	20	.70	.33	.18
19	.07	.04	.03	.02	.01	.02	.87	.70	16	.71	.17	.16
20	.05	.04	.02	.02	.01	.02	.91	1.2	14	.97	.13	.14
21	.05	.04	.02	.01	.01	.02	1.3	2.6	12	.96	.15	.13
22	.10	.04	.02	.01	.01	.02	1.3	5.4	11	.68	.16	.12
23	.11	.04	.02	.01	.01	.02	1.7	8.2	11	.51	.16	.11
24	.05	.04	.02	.01	.01	.02	1.2	11	10	.44	.13	.12
25	.04	.03	.02	.01	.01	.02	.89	7.0	9.3	.83	.11	.12
26	.04	.03	.02	.01	.01	.02	.65	6.7	9.1	.43	.10	.11
27	.06	.03	.02	.01	.01	.02	.52	7.3	7.3	.31	.10	.13
28	.07	.03	.02	.01	.01	.02	.40	8.0	6.0	.26	.10	.21
29	.07	.03	.02	.01	---	.02	.31	6.9	5.2	.27	.10	.22
30	.07	.03	.02	.01	---	.02	.26	5.8	5.5	.25	.10	.15
31	.06	---	.02	.01	---	.02	---	8.1	---	.21	.14	---
TOTAL	2.27	1.31	0.81	0.51	0.28	0.44	12.80	93.76	451.1	42.75	5.47	4.07
MEAN	.073	.044	.026	.016	.010	.014	.43	3.02	15.0	1.38	.18	.14
MAX	.34	.06	.03	.02	.01	.02	1.7	11	28	5.0	1.0	.26
MIN	.04	.03	.02	.01	.01	.01	.02	.22	5.0	.21	.10	.10
AC-FT	4.5	2.6	1.6	1.0	.6	.9	25	186	895	85	11	8.1

CAL YR 1989 TOTAL 406.71 MEAN 1.11 MAX 15 MIN .02 AC-FT 807
WTR YR 1990 TOTAL 615.57 MEAN 1.69 MAX 28 MIN .01 AC-FT 1220

09238710 FISH CREEK TRIBUTARY BELOW LONG LAKE, NEAR BUFFALO PASS, CO.

LOCATION.--Lat 40°28'36", Long 106°41'13", in NE¼SE¼ sec. 22, T.6N., R.83W., Routt county, Hydrologic Unit 14050001, on right bank, 0.1 mi below Long Lake Spillway, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--1.03 mi².

PERIOD OF RECORD.--August 29, 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 27-30, Nov. 6-10, Nov. 22 to Dec. 24, Jan. 9-10, 14-17, 25, Dec. 29 to Feb. 2, Apr. 22-23, May 13-15, and May 28 to June 1. Records good except for estimated daily discharges, which are poor. Flow regulated by Long Lake Reservoir, capacity 397 acre-ft, 0.1 mi upstream. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--6 years, 1.76 ft³/s; 1,280 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71 ft³/s, June 14, 1990, gage height, 2.09 ft, from rating curve extended above 33 ft³/s; maximum gage height, 4.14 ft, May 30, 1990 (backwater from ice); no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 71 ft³/s at 2100 June 14, gage height, 2.09 ft, from rating curve extended above 33 ft³/s; maximum gage height, 4.14 ft at 0800 May 30 (backwater from ice); no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.01	2.0	5.2	.25	.00
2	.00	.00	.00	.00	.00	.00	.00	.01	7.0	4.7	.19	.01
3	.00	.00	.00	.00	.00	.00	.00	.01	4.3	4.9	.15	.02
4	.00	.00	.00	.00	.00	.00	.00	.01	6.2	7.3	.12	.02
5	.00	.00	.00	.00	.00	.00	.00	.02	14	4.3	.08	.01
6	.00	.00	.00	.00	.00	.00	.00	.02	25	3.2	.07	.01
7	.00	.00	.00	.00	.00	.00	.00	.02	31	2.5	.06	.00
8	.00	.00	.00	.00	.00	.00	.00	.02	34	3.3	.05	.00
9	.00	.00	.00	.00	.00	.00	.00	.03	30	4.5	.05	.00
10	.00	.00	.00	.00	.00	.00	.00	.04	28	3.0	.03	.00
11	.00	.00	.00	.00	.00	.00	.00	.07	32	2.1	.02	.00
12	.00	.00	.00	.00	.00	.00	.00	.17	39	1.6	.02	.00
13	.00	.00	.00	.00	.00	.00	.00	.15	17	1.3	.02	.00
14	.00	.00	.00	.00	.00	.00	.00	.15	32	1.2	.02	.00
15	.00	.00	.00	.00	.00	.00	.00	.10	28	1.1	.02	.00
16	.00	.00	.00	.00	.00	.00	.00	.04	19	.91	.02	.00
17	.00	.00	.00	.00	.00	.00	.00	.03	18	.81	.08	.00
18	.00	.00	.00	.00	.00	.00	.00	.03	24	.72	.06	.00
19	.00	.00	.00	.00	.00	.00	.00	.03	21	.66	.03	.00
20	.00	.00	.00	.00	.00	.00	.00	.05	15	.62	.03	.00
21	.00	.00	.00	.00	.00	.00	.00	.10	14	.71	.03	.00
22	.00	.00	.00	.00	.00	.00	.00	.23	13	.68	.02	.00
23	.00	.00	.00	.00	.00	.00	.00	.35	12	.60	.02	.00
24	.00	.00	.00	.00	.00	.00	.00	.46	12	.54	.02	.00
25	.00	.00	.00	.00	.00	.00	.00	.49	11	.61	.02	.00
26	.00	.00	.00	.00	.00	.00	.00	.58	11	.59	.01	.00
27	.00	.00	.00	.00	.00	.00	.00	.73	11	.50	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	1.0	8.6	.46	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.80	7.0	.38	.00	.01
30	.00	.00	.00	.00	---	.00	.00	.70	6.3	.34	.00	.00
31	.00	---	.00	.00	---	.00	---	1.5	---	.30	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.95	532.4	59.63	1.49	0.08
MEAN	.000	.000	.000	.000	.000	.000	.000	.26	17.7	1.92	.048	.003
MAX	.00	.00	.00	.00	.00	.00	.00	1.5	39	7.3	.25	.02
MIN	.00	.00	.00	.00	.00	.00	.00	.01	2.0	.30	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	16	1060	118	3.0	.2

CAL YR 1989 TOTAL 412.02 MEAN 1.13 MAX 17 MIN .00 AC-FT 817
WTR YR 1990 TOTAL 601.55 MEAN 1.65 MAX 39 MIN .00 AC-FT 1190

09238750 MIDDLE FORK FISH CREEK NEAR BUFFALO PASS, CO

LOCATION.--Lat 40°26'54", Long 106°41'30", in NE¼SE¼ sec. 10, T.6N., R.83W., Routt County, Hydrologic Unit 14050001, on right bank, 0.25 mi above Fish Creek Reservoir, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--1.37 mi².

PERIOD OF RECORD.--August 31, 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,955 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-2, and May 25-26. Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--6 years, 3.85 ft³/s; 2,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 146 ft³/s, June 9, 1986, gage height, 4.56 ft, from rating curve extended above 24 ft³/s; no flow, Feb. 17-20, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 80 ft³/s, June 14; minimum daily, 0.08 ft³/s, Sept. 14-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.21	.27	.27	.23	.18	.20	1.2	32	4.1	.43	.24
2	.14	.21	.27	.27	.23	.17	.22	1.3	19	3.9	.42	.31
3	.13	.19	.27	.27	.22	.17	.29	1.7	15	6.4	.39	.38
4	.39	.20	.26	.27	.22	.18	.51	1.8	28	5.6	.36	.19
5	.33	.21	.25	.26	.22	.18	.53	1.7	41	3.0	.36	.17
6	.25	.23	.26	.26	.21	.18	.45	2.7	43	2.6	.35	.18
7	.20	.25	.26	.27	.21	.17	.41	5.1	52	2.6	.33	.15
8	.17	.24	.26	.26	.21	.17	.43	4.7	53	6.5	.35	.15
9	.16	.24	.26	.26	.21	.17	.41	3.2	47	4.3	.38	.15
10	.14	.23	.28	.26	.20	.17	.38	2.4	79	2.6	.32	.14
11	.13	.24	.28	.25	.19	.17	.37	2.9	79	1.9	.30	.12
12	.12	.24	.28	.25	.19	.17	.37	2.9	56	1.7	.46	.10
13	.13	.24	.28	.25	.20	.17	.37	2.5	47	1.8	.35	.09
14	.13	.25	.28	.25	.20	.17	.36	2.1	80	1.9	.36	.08
15	.15	.25	.28	.25	.21	.17	.44	2.2	65	1.6	.35	.08
16	.16	.24	.28	.26	.19	.17	1.0	2.0	43	1.5	.38	.09
17	.14	.23	.28	.25	.19	.17	1.2	1.8	57	1.2	2.8	.40
18	.15	.24	.28	.26	.19	.17	1.4	1.9	60	.96	.74	.30
19	.14	.23	.28	.26	.19	.17	1.8	2.1	42	.94	.42	.21
20	.12	.23	.28	.25	.19	.18	1.7	3.3	38	1.3	.34	.20
21	.11	.24	.28	.25	.18	.19	2.4	5.7	33	1.3	.33	.17
22	.20	.24	.28	.24	.17	.19	3.0	8.9	28	1.1	.34	.15
23	.21	.23	.28	.25	.17	.20	4.2	12	24	.87	.36	.14
24	.15	.22	.28	.25	.17	.19	2.9	15	21	.75	.29	.15
25	.11	.24	.28	.25	.17	.19	2.4	20	17	1.6	.24	.15
26	.21	.25	.28	.24	.18	.20	2.0	25	15	.81	.21	.13
27	.40	.27	.28	.25	.18	.22	1.7	29	11	.61	.19	.16
28	.22	.28	.28	.24	.18	.21	1.5	30	8.8	.56	.18	.17
29	.20	.27	.27	.23	---	.20	1.4	30	6.2	.54	.16	.22
30	.20	.27	.27	.23	---	.20	1.3	22	4.9	.51	.16	.15
31	.20	---	.28	.23	---	.20	---	29	---	.45	.24	---
TOTAL	5.63	7.11	8.50	7.84	5.50	5.64	35.64	276.1	1144.9	65.50	12.89	5.32
MEAN	.18	.24	.27	.25	.20	.18	1.19	8.91	38.2	2.11	.42	.18
MAX	.40	.28	.28	.27	.23	.22	4.2	30	80	6.5	2.8	.40
MIN	.11	.19	.25	.23	.17	.17	.20	1.2	4.9	.45	.16	.08
AC-FT	11	14	17	16	11	11	71	548	2270	130	26	11

CAL YR 1989 TOTAL 1349.24 MEAN 3.70 MAX 47 MIN .05 AC-FT 2680
WTR YR 1990 TOTAL 1580.57 MEAN 4.33 MAX 80 MIN .08 AC-FT 3140

09238770 GRANITE CREEK NEAR BUFFALO PASS, CO

LOCATION.--Lat 40°29'35", Long 106°41'31", NE¼NE¼ sec. 15, T.6N., R.83W., Routt County, Hydrologic Unit 14050001, on left bank 0.1 mi upstream from Fish Creek Reservoir, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--2.82 mi².

PERIOD OF RECORD.--August 31, 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,875 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 10 to June 25. Records fair except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--6 years, 7.22 ft³/s; 5,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 126 ft³/s, June 11, 1990; minimum daily, 0.13 ft³/s, Mar. 21, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 126 ft³/s, June 11; minimum daily, 0.17 ft³/s, Jan. 3-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	.49	.44	.20	.29	.24	.26	1.8	70	13	.96	.65
2	.52	.51	.49	.19	.29	.23	.28	1.9	55	12	.91	.79
3	.49	.49	.50	.17	.28	.23	.35	2.3	59	18	.84	.81
4	.59	.46	.51	.17	.28	.24	.57	2.4	70	16	.77	.60
5	.57	.59	.45	.17	.28	.24	.59	2.3	80	9.5	.71	.56
6	.51	.56	.41	.17	.27	.24	.51	3.3	82	8.6	.69	.55
7	.48	.54	.39	.18	.27	.23	.47	5.7	84	7.8	.62	.52
8	.48	.54	.38	.21	.27	.23	.50	5.3	91	18	.62	.52
9	.46	.58	.41	.22	.26	.23	.58	3.8	90	12	.67	.52
10	.44	.58	.41	.22	.25	.23	.55	2.6	93	7.2	.64	.52
11	.42	.48	.41	.24	.25	.23	.54	3.1	126	5.6	.63	.52
12	.42	.47	.44	.28	.26	.23	.54	3.1	103	4.9	.77	.51
13	.42	.46	.41	.31	.26	.23	.54	2.7	71	5.7	.68	.48
14	.40	.44	.42	.31	.27	.23	.53	2.3	79	6.2	.65	.48
15	.41	.43	.43	.31	.25	.23	.70	2.4	102	5.3	.87	.48
16	.44	.41	.31	.32	.25	.23	1.6	2.2	84	5.0	.98	.48
17	.43	.38	.28	.31	.25	.23	1.8	2.4	72	3.9	6.1	.73
18	.48	.37	.29	.32	.25	.23	2.0	2.5	85	3.0	1.3	.66
19	.47	.36	.27	.32	.25	.23	2.4	4.0	81	2.9	.88	.56
20	.39	.37	.28	.31	.25	.24	2.3	5.0	64	3.6	.66	.56
21	.43	.40	.26	.31	.24	.25	3.0	10	62	3.6	.68	.55
22	.47	.39	.25	.30	.23	.25	3.6	17	56	2.7	.68	.51
23	.52	.42	.27	.31	.23	.26	4.8	22	52	2.3	.72	.48
24	.46	.42	.26	.31	.23	.25	3.5	30	49	2.0	.67	.49
25	.45	.39	.24	.31	.23	.25	3.0	45	44	4.8	.64	.51
26	.63	.40	.23	.30	.24	.26	2.6	64	32	1.9	.60	.49
27	.48	.43	.20	.31	.24	.28	2.3	70	25	1.4	.56	.52
28	.45	.40	.20	.30	.24	.27	2.1	80	22	1.3	.56	.56
29	.44	.39	.20	.29	---	.26	2.0	66	18	1.2	.56	.61
30	.42	.37	.19	.29	---	.26	1.9	74	15	1.1	.56	.55
31	.43	---	.18	.29	---	.26	---	80	---	1.0	.61	---
TOTAL	14.48	13.52	10.41	8.25	7.16	7.50	46.41	619.1	2016	191.5	27.79	16.77
MEAN	.47	.45	.34	.27	.26	.24	1.55	20.0	67.2	6.18	.90	.56
MAX	.63	.59	.51	.32	.29	.28	4.8	80	126	18	6.1	.81
MIN	.39	.36	.18	.17	.23	.23	.26	1.8	15	1.0	.56	.48
AC-FT	29	27	21	16	14	15	92	1230	4000	380	55	33

CAL YR 1989 TOTAL 2439.49 MEAN 6.68 MAX 76 MIN .18 AC-FT 4840
WTR YR 1990 TOTAL 2978.89 MEAN 8.16 MAX 126 MIN .17 AC-FT 5910

09238800 MIDDLE FORK FISH CREEK TRIBUTARY, BELOW FISH CREEK RESERVOIR, CO

LOCATION.--Lat 40°29'50", Long 106°41'54", in NW¼SE¼ sec. 10, T.6N., R.83W., Routt County, Hydrologic Unit 14050001, on right bank, at Fish Creek Reservoir Spillway, and 7.5 mi east of Steamboat Springs.

DRAINAGE AREA.--4.78 mi².

PERIOD OF RECORD.--August 31, 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,855 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: May 31 to June 2, and June 14-15. Records excellent except for periods of flow, which are fair. Flow regulated by Fish Creek Reservoir, capacity, 1,840 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--6 years, 7.84 ft³/s; 5,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 195 ft³/s, June 10, 1990, gage height, 1.82 ft; maximum gage height, 4.44 ft, May 31, 1990 (ice jam); no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 195 ft³/s at 2100 June 10, gage height, 1.82 ft; maximum gage height, 4.44 ft, at 0400 May 31 (ice jam); no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	58	20	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	80	17	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	80	17	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	79	26	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	113	17	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	137	13	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	148	9.9	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	157	13	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	149	18	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	153	12	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	166	8.5	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	134	5.9	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	97	4.4	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	118	4.5	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	136	3.9	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	111	3.6	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	102	2.7	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	117	1.9	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	107	1.3	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	88	1.2	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	84	1.3	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	76	1.1	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	70	.75	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	65	.42	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	58	.88	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	51	.86	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	46	.26	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	38	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.80	31	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	13	24	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	36	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.80	2873	206.37	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	1.61	95.8	6.66	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	36	166	26	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	24	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	99	5700	409	.00	.00

CAL YR 1989 TOTAL 2594.04 MEAN 7.11 MAX 113 MIN .00 AC-FT 5150
WTR YR 1990 TOTAL 3129.17 MEAN 8.57 MAX 166 MIN .00 AC-FT 6210

09238900 FISH CREEK AT UPPER STATION, NEAR STEAMBOAT SPRINGS, CO

LOCATION.--Lat 40°28'30", long 106°47'11", in SE¼SE¼ sec.15, T.6 N., R.84 W., Routt County, Hydrologic Unit 14050001, on right bank 2.6 mi upstream from mouth and 2.5 mi east of Steamboat Springs.

DRAINAGE AREA.--24.8 mi².

PERIOD OF RECORD.--October 1966 to September 1972, May 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Diversions upstream from station by Mount Werner Recreation district and City of Steamboat Springs for domestic use began in 1972 (see table below for figures of diversion). Natural flow of stream affected by storage in Fish Creek and Long Lake Reservoir, combined capacity 2,237 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s, June 20, 1968, gage height, 3.14 ft; minimum daily, 0.01 ft³/s, Aug. 7, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 743 ft³/s, at 2000 June 8, gage height, 2.67 ft; minimum daily, 1.7 ft³/s, Sept. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	3.8	4.8	2.8	3.6	5.1	20	37	427	73	4.7	5.8
2	5.5	3.2	5.2	3.0	3.8	5.4	27	40	299	64	4.6	4.9
3	5.5	4.2	6.8	3.2	3.4	5.8	37	46	252	67	3.4	5.8
4	6.8	4.0	6.0	3.4	3.4	5.5	42	49	364	94	2.6	4.9
5	7.2	4.5	6.1	3.4	3.5	6.4	40	51	487	59	2.6	4.7
6	6.7	4.5	4.4	3.1	3.7	5.9	38	73	554	48	2.3	4.5
7	6.0	5.3	4.1	3.0	3.2	5.6	38	98	572	42	1.9	4.0
8	6.0	5.1	4.1	3.3	3.2	6.0	38	85	591	60	2.4	3.4
9	5.9	4.7	3.8	3.5	3.6	6.7	36	65	542	67	5.0	3.1
10	6.0	5.0	4.3	3.2	3.7	5.7	32	59	546	47	3.9	2.1
11	5.6	5.0	4.0	3.8	4.2	6.9	32	69	543	36	4.0	2.2
12	5.5	5.1	3.3	3.5	3.2	6.9	32	66	514	30	4.6	1.7
13	2.5	5.8	3.5	3.7	3.2	6.7	31	61	379	26	4.2	3.8
14	2.4	4.9	4.3	3.6	4.2	6.6	32	57	459	28	3.7	6.1
15	2.9	5.0	4.7	3.4	3.6	6.6	39	59	428	24	4.5	4.6
16	3.5	5.4	4.8	3.5	3.6	6.4	50	53	345	21	5.8	3.1
17	3.5	5.1	4.4	3.7	4.1	6.6	54	51	320	19	22	3.0
18	3.1	4.4	4.5	3.5	3.4	6.4	60	57	357	15	12	3.0
19	2.7	4.6	4.2	3.7	3.6	6.5	67	61	326	14	7.3	3.2
20	3.5	4.4	3.8	3.4	3.9	7.9	65	77	284	15	5.9	4.0
21	3.8	4.3	3.9	3.5	3.0	9.3	75	108	270	18	5.9	3.4
22	3.9	4.6	4.1	3.3	4.1	10	82	151	245	15	5.6	4.0
23	4.3	4.4	3.9	3.4	3.9	14	91	205	223	12	6.6	3.6
24	4.5	4.1	3.8	3.3	3.9	13	81	272	203	10	5.6	4.1
25	3.7	4.3	3.7	3.8	4.4	13	70	258	182	17	4.8	3.4
26	4.7	4.6	3.7	4.1	4.7	14	58	228	167	13	4.2	3.4
27	5.1	4.2	3.6	3.4	5.1	18	48	239	147	9.0	3.8	6.4
28	4.4	4.8	3.1	3.3	4.8	18	44	275	124	7.2	3.3	6.1
29	4.0	5.0	3.0	3.6	---	17	42	238	101	6.1	2.6	5.7
30	4.8	4.9	3.7	3.5	---	17	39	224	85	5.7	2.8	3.8
31	4.7	---	3.3	3.4	---	16	---	324	---	5.0	4.5	---
TOTAL	143.6	139.2	130.9	106.3	106.0	284.9	1440	3736	10336	967.0	157.1	121.8
MEAN	4.63	4.44	4.22	3.43	3.79	9.19	48.0	121	345	31.2	5.07	4.06
MAX	7.2	5.8	6.8	4.1	5.1	18	91	324	591	94	22	6.4
MIN	2.4	3.2	3.0	2.8	3.0	5.1	20	37	85	5.0	1.9	1.7
AC-FT	285	276	260	211	210	565	2860	7410	20500	1920	312	242
a	176	156	191	201	176	190	148	171	269	294	296	222

CAL YR 1989 TOTAL 15330.1 MEAN 42.0 MAX 459 MIN 1.9 AC-FT 30410
WTR YR 1990 TOTAL 17668.8 MEAN 48.4 MAX 591 MIN 1.7 AC-FT 35050

a-Diversions, in acre-feet, by Mount Werner Water and Sanitation District, and City of Steamboat Springs.

09239500 YAMPA RIVER AT STEAMBOAT SPRINGS, CO

LOCATION.--Lat 40°29'01", long 106°49'54", in NW¼NE¼ sec.17, T.6 N., R.84W., Routt County, Hydrologic Unit 14050001, on left bank 30 ft upstream from Fifth Street Bridge in Steamboat Springs and 0.6 mi upstream from Soda Creek.

DRAINAGE AREA.--604 mi².

PERIOD OF RECORD.--May 1904 to October 1906, October 1909 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 764: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,695.47 ft above National Geodetic Vertical Datum of 1929. Prior to May 8, 1905, nonrecording gage at bridge 0.2 mi upstream at datum 4.16 ft, higher. May 8, 1905, to Oct. 31, 1906, nonrecording gage on bridge 30 ft upstream at datum 0.44 ft, higher. Mar. 8, 1910, to Sept. 11, 1934, water-stage recorder on right bank, 60 ft downstream, at datum 0.44 ft, higher. Sept. 11, 1934, to Aug. 17, 1988, water-stage recorder on right bank, 60 ft downstream, at present datum.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by two diversions for irrigation to Egeria Creek in Colorado River basin, one diversion for irrigation from Trout Creek drainage to Oak Creek drainage, irrigation of about 19,700 acres upstream from station, and by storage in Stillwater, Yampa, Yamcola, Stagecoach, and Catamount Reservoirs, (total capacity 56,895 acre-ft). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--83 years, 466 ft³/s; 337,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,820 ft³/s, June 14, 1921, gage height, 7.08 ft, present datum, from rating curve extended above 4,800 ft³/s; maximum gage height, 7.12 ft, June 25, 1984; minimum daily discharge, 4.0 ft³/s, Sept. 8, 1934, Sept. 10-13, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 8	2215	*2,430	*5.71				

Minimum daily, 42 ft³/s, Aug. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	150	90	72	65	99	326	427	1730	226	95	54
2	58	147	72	73	64	101	413	412	1220	201	95	54
3	58	151	68	77	61	97	506	429	1130	207	87	61
4	59	156	69	72	59	100	537	460	1430	396	81	66
5	60	154	74	77	60	96	478	466	1710	254	81	60
6	63	158	70	74	60	109	432	548	1870	210	81	58
7	62	157	65	76	64	110	391	747	1890	188	70	60
8	61	154	62	81	62	111	379	799	2030	233	67	58
9	60	154	67	79	71	114	409	707	1960	311	70	54
10	60	154	67	75	93	108	379	616	1860	270	61	52
11	61	96	63	77	100	103	350	683	1790	208	74	52
12	59	94	64	74	96	99	352	668	2050	164	56	50
13	57	92	66	75	98	106	348	635	1660	144	56	49
14	58	79	70	78	97	118	342	588	1550	138	56	45
15	64	72	71	75	90	121	355	632	1390	124	55	46
16	65	68	73	76	95	118	450	640	1180	121	56	50
17	69	66	68	73	87	108	497	586	1040	117	87	59
18	68	62	69	66	83	101	522	611	1020	110	105	82
19	80	63	72	67	80	103	553	651	952	108	89	81
20	90	64	75	67	82	118	584	745	826	107	77	75
21	107	64	79	69	88	143	633	876	771	127	72	67
22	108	63	76	68	96	165	664	1110	701	124	66	67
23	110	62	74	64	98	201	727	1270	614	114	69	66
24	110	63	74	67	90	198	709	1590	572	110	66	67
25	111	70	69	68	83	190	686	1730	510	121	60	65
26	146	71	69	68	79	198	635	1650	470	123	55	55
27	145	63	74	69	87	239	544	1500	418	115	50	58
28	158	63	75	67	96	264	510	1610	354	104	46	58
29	150	71	78	68	---	280	497	1620	299	97	44	60
30	149	96	78	63	---	294	473	1430	257	98	42	64
31	149	---	77	65	---	283	---	1640	---	94	45	---
TOTAL	2714	2977	2218	2220	2284	4595	14681	28076	35254	5064	2114	1793
MEAN	87.5	99.2	71.5	71.6	81.6	148	489	906	1175	163	68.2	59.8
MAX	158	158	90	81	100	294	727	1730	2050	396	105	82
MIN	57	62	62	63	59	96	326	412	257	94	42	45
AC-FT	5380	5900	4400	4400	4530	9110	29120	55690	69930	10040	4190	3560

CAL YR 1989 TOTAL 92050 MEAN 252 MAX 1710 MIN 49 AC-FT 182600
WTR YR 1990 TOTAL 103990 MEAN 285 MAX 2050 MIN 42 AC-FT 206300

09240900 ELK RIVER ABOVE CLARK, CO

LOCATION.--Lat 40°44'38", long 106°51'13", in SW¼SE¼ sec.13, T.9 N., R.85 W., Routt County, Hydrologic Unit 14050001, on right bank 0.4 mi upstream from Willow Creek, 1.8 mi downstream from Coulton Creek and 3.3 mi northeast of Clark, CO.

DRAINAGE AREA.--122 mi².

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,525 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 14, 15, 24, 25, Nov. 28 to Dec. 9, Dec. 11-13, Dec. 16-20, Dec. 25 to Jan. 9, Jan. 12-14, 18-23, Feb. 3-6, Mar. 12-14, and Aug. 21 to Sept. 30. Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,320 ft³/s, May 18, 1988, gage height, 6.03 ft; minimum daily, 17 ft³/s, Nov. 9, 10, 13, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,180 ft³/s at 2300 June 11, gage height, 5.89 ft; minimum daily, 27 ft³/s, Dec. 25 and Jan. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	48	47	30	32	29	46	175	868	625	115	51
2	44	63	46	32	30	31	50	173	714	579	111	53
3	43	98	46	30	32	35	60	200	705	531	103	71
4	46	50	45	31	33	35	66	218	927	613	98	53
5	51	44	45	33	32	35	72	229	1230	481	91	49
6	48	44	47	34	32	35	81	309	1410	459	90	58
7	45	58	46	32	32	35	84	449	1300	418	88	53
8	44	52	46	28	32	35	91	454	1400	446	85	49
9	44	43	45	31	32	35	99	286	1430	452	83	48
10	43	41	47	33	32	38	94	249	1490	396	81	47
11	42	44	42	27	32	40	89	305	1800	336	78	43
12	41	56	40	30	33	40	101	279	1710	292	77	40
13	40	48	38	32	33	38	102	245	1240	268	76	37
14	38	44	41	35	33	36	114	259	1230	250	72	35
15	38	52	41	35	30	33	142	324	1170	234	72	34
16	41	56	38	30	31	33	190	268	1030	237	90	35
17	41	50	37	30	37	39	189	240	892	220	120	58
18	38	54	37	32	33	34	210	294	1060	199	104	66
19	40	56	36	32	35	37	226	304	1260	191	83	56
20	48	56	38	32	38	36	217	330	1030	215	73	59
21	46	49	38	32	36	39	232	359	1080	246	79	52
22	42	50	44	34	37	42	261	450	1110	194	78	48
23	43	54	33	35	37	41	319	645	1150	179	77	45
24	43	50	33	34	39	41	329	822	1190	165	67	43
25	40	47	27	34	41	42	268	858	1100	224	62	42
26	46	43	28	35	32	47	239	795	1050	169	57	42
27	45	41	28	36	31	44	212	711	995	151	53	42
28	46	45	29	39	30	44	195	799	913	135	51	42
29	45	46	29	35	---	42	197	862	805	130	49	44
30	45	47	29	35	---	43	169	689	701	128	46	46
31	61	---	30	35	---	43	---	855	---	121	46	---
TOTAL	1360	1529	1196	1013	937	1177	4744	13435	33990	9284	2455	1441
MEAN	43.9	51.0	38.6	32.7	33.5	38.0	158	433	1133	299	79.2	48.0
MAX	61	98	47	39	41	47	329	862	1800	625	120	71
MIN	38	41	27	27	30	29	46	173	701	121	46	34
AC-FT	2700	3030	2370	2010	1860	2330	9410	26650	67420	18410	4870	2860

CAL YR 1989 TOTAL 61286 MEAN 168 MAX 1000 MIN 27 AC-FT 121600
WTR YR 1990 TOTAL 72561 MEAN 199 MAX 1800 MIN 27 AC-FT 143900

09241000 ELK RIVER AT CLARK, CO

LOCATION.--Lat 40°43'03", long 106°54'55", in NW¼NW¼ sec.27, T.9 N., R.85 W., Routt County, Hydrologic Unit 14050001, on left bank 30 ft downstream from bridge on State Highway 129, 0.8 mi north of Clark, and 2.0 mi upstream from Cottonwood Gulch.

DRAINAGE AREA.--216 mi².

PERIOD OF RECORD.--May 1910 to September 1922 (published as "near Clark"), April 1930 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1733: 1956. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,267.75 ft, (State Highway Department bench mark). May 1910 to September 1922, nonrecording gage at site 30 ft upstream at datum 0.15 ft, lower. Apr. 23, 1930, to Sept. 27, 1934, water-stage recorder at present site at datum 0.15 ft, lower.

REMARKS.--Estimated daily discharges: Nov. 28 to Jan. 27, Feb. 15-24, 26, and Feb. 28 to Mar. 21. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 230 acres upstream from and about 460 acres downstream from station. Natural flow of stream affected by storage in Lester Creek Reservoir (known also as Pearl Lake), capacity, 5,660 acre-ft, since 1963, and Steamboat Lake, capacity, 23,060 acre-ft, since 1968. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--72 years, 335 ft³/s; 242,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,910 ft³/s, May 23, 1984, gage height, 6.12 ft; minimum daily determined, 22 ft³/s, Dec. 12, 1963, but a lesser discharge may have occurred during periods of no gage-height record prior to 1939.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	0230	*2,800	*4.91	No other peak greater than base discharge.			

Minimum daily, 37 ft³/s, Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	42	57	56	45	46	63	381	953	644	125	58
2	45	47	56	58	44	48	76	386	791	557	118	59
3	43	76	56	56	45	52	91	379	702	509	114	77
4	48	62	55	57	51	52	101	394	930	590	107	60
5	51	48	56	60	58	52	119	404	1290	471	102	55
6	46	46	58	61	57	52	125	497	1490	429	98	64
7	45	43	57	59	55	52	130	632	1410	386	95	59
8	44	45	57	55	53	52	150	620	1410	416	92	55
9	43	44	56	58	51	52	160	492	1470	429	92	54
10	42	44	56	56	50	54	150	434	1520	377	90	53
11	42	41	55	58	48	56	164	475	1940	317	86	49
12	41	43	54	58	53	54	186	442	1960	285	85	46
13	40	47	54	60	48	52	196	433	1370	262	85	43
14	40	41	53	62	48	52	236	430	1260	249	80	41
15	40	39	53	58	46	50	327	483	1210	230	78	40
16	42	46	56	56	48	54	393	439	1120	231	99	41
17	43	53	58	54	52	52	396	414	992	220	119	64
18	39	45	57	56	50	54	458	470	1100	199	114	72
19	37	50	58	56	50	53	559	465	1180	190	88	62
20	40	45	58	56	52	54	562	502	1090	196	79	65
21	43	44	54	52	51	54	609	527	1120	266	85	58
22	43	42	60	56	51	56	636	654	1120	206	84	54
23	44	47	58	48	51	69	665	808	1130	184	83	51
24	43	56	50	46	58	74	675	1000	1140	172	73	49
25	41	51	50	47	56	58	683	1090	1100	235	69	48
26	47	55	52	48	49	52	606	969	1080	189	64	48
27	46	53	52	49	49	53	524	807	1040	166	60	48
28	48	54	55	51	49	61	506	865	946	152	58	48
29	41	56	55	50	---	60	422	923	830	141	56	50
30	45	58	55	49	---	57	385	774	761	138	53	52
31	41	---	54	47	---	59	---	918	---	129	53	---
TOTAL	1337	1463	1715	1693	1418	1696	10353	18507	35455	9165	2684	1623
MEAN	43.1	48.8	55.3	54.6	50.6	54.7	345	597	1182	296	86.6	54.1
MAX	51	76	60	62	58	74	683	1090	1960	644	125	77
MIN	37	39	50	46	44	46	63	379	702	129	53	40
AC-FT	2650	2900	3400	3360	2810	3360	20540	36710	70320	18180	5320	3220

CAL YR 1989 TOTAL 74706 MEAN 205 MAX 973 MIN 37 AC-FT 148200
WTR YR 1990 TOTAL 87109 MEAN 239 MAX 1960 MIN 37 AC-FT 172000

GREEN RIVER BASIN

09242500 ELK RIVER NEAR MILNER, CO
(Formerly published as Elk River near Trull, CO)

LOCATION.--Lat 40°30'53", long 106°57'12", in NW¼NW¼ sec.5, T.6 N., R.85 W., Routt County, Hydrologic Unit 14050001, on left bank 30 ft downstream from bridge on County Road 44, 3.2 mi east of Milner, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--415 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1904 to September 1906, October 1910 to September 1927, (published as "near Trull"), April to September 1989. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,590 ft above National Geodetic Vertical Datum of 1929, from topographic map. May 1904 to September 1909, nonrecording gage, at different datum, October, 1910 to September, 1927, water-stage recorder at different datum..

REMARKS.--Estimated daily discharges: Aug. 21-25. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 6,500 acres upstream from and about 1,000 acres downstream from station. Natural flow of stream affected by storage in Lester Creek Reservoir (known also as Pearl Lake), capacity, 5,660 acre-ft, since 1963, and Steamboat Lake, capacity, 23,060 acre-ft, since 1968.

AVERAGE DISCHARGE.--20 years (water years 1905-1906, 1910-1927), 593 ft³/s; 429,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,530 ft³/s, June 15, 1921, gage height, 6.35 ft (site and datum then in use); minimum daily, 26 ft³/s, Aug. 30, 31, 1990, but a lesser discharge may have occurred during periods of no gage-height record prior to Sept. 20, 1919.

EXTREMES FOR PERIOD APRIL TO SEPTEMBER.--Maximum discharge, 3,660 ft³/s at 1130 June 12, gage height, 6.34 ft; minimum daily, 26 ft³/s, Aug. 30, 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	275	676	1510	837	131	31
2	---	---	---	---	---	---	331	650	1230	760	131	33
3	---	---	---	---	---	---	378	623	1070	695	137	34
4	---	---	---	---	---	---	366	655	1400	824	131	42
5	---	---	---	---	---	---	369	643	2020	627	131	37
6	---	---	---	---	---	---	354	758	2180	554	120	40
7	---	---	---	---	---	---	347	999	2330	535	115	53
8	---	---	---	---	---	---	384	1040	2290	597	114	58
9	---	---	---	---	---	---	437	835	2280	617	111	55
10	---	---	---	---	---	---	378	717	2350	592	113	53
11	---	---	---	---	---	---	373	772	2800	466	110	50
12	---	---	---	---	---	---	408	746	3170	398	106	48
13	---	---	---	---	---	---	417	724	2280	352	98	49
14	---	---	---	---	---	---	433	695	2030	337	94	47
15	---	---	---	---	---	---	489	762	1900	305	84	44
16	---	---	---	---	---	---	671	719	1680	305	94	37
17	---	---	---	---	---	---	679	652	1450	278	127	55
18	---	---	---	---	---	---	754	734	1650	245	144	86
19	---	---	---	---	---	---	864	730	1750	226	100	73
20	---	---	---	---	---	---	844	769	1540	238	87	76
21	---	---	---	---	---	---	889	804	1630	330	81	73
22	---	---	---	---	---	---	913	1000	1640	269	76	65
23	---	---	---	---	---	---	1000	1260	1680	210	70	56
24	---	---	---	---	---	---	1030	1390	1620	212	64	52
25	---	---	---	---	---	---	1010	1520	1540	322	55	59
26	---	---	---	---	---	---	959	1480	1500	248	47	56
27	---	---	---	---	---	---	791	1260	1420	202	42	55
28	---	---	---	---	---	---	749	1340	1250	180	32	59
29	---	---	---	---	---	---	733	1500	1050	165	26	61
30	---	---	---	---	---	---	695	1230	931	151	26	61
31	---	---	---	---	---	---	---	1470	---	139	27	---
TOTAL	---	---	---	---	---	---	18320	29153	53171	12216	2824	1598
MEAN	---	---	---	---	---	---	611	940	1772	394	91.1	53.3
MAX	---	---	---	---	---	---	1030	1520	3170	837	144	86
MIN	---	---	---	---	---	---	275	623	931	139	26	31
AC-FT	---	---	---	---	---	---	36340	57820	105500	24230	5600	3170

09242500 ELK RIVER NEAR MILNER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1975 to September 1976 and April 1990 to September 1990.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR 25...	1430	950	86	8.1	4.5	10.0	38	11	2.5
MAY 24...	1215	1300	50	8.0	7.0	9.3	21	6.6	1.2
AUG 28...	1620	22	120	9.0	21.5	8.4	53	16	3.2

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
APR 25...	2.7	0.2	0.8	42	7.2	1.0	0.2	9.9	61
MAY 24...	1.5	0.1	0.5	21	4.0	0.7	<0.1	6.4	34
AUG 28...	3.6	0.2	1.4	49	12	1.8	<0.1	6.8	74

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
APR 25...	0.08	156	<0.01	0.10	0.01	0.40	0.01	<0.01
MAY 24...	0.05	118	<0.01	<0.1	0.04	0.30	<0.01	<0.01
AUG 28...	0.10	4.41	<0.01	<0.1	<0.01	<0.2	0.01	<0.01

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 25...	1000	<1	1	100	<10	4	<1	<1	4	1900
AUG 28...	20	<1	<1	<100	<10	<1	<1	1	2	110

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
APR 25...	3	<10	70	<0.1	<1	2	<1	<1	70	<10
AUG 28...	1	<10	20	<0.1	<1	1	<1	<1	100	<10

GREEN RIVER BASIN

09242500 ELK RIVER NEAR MILNER, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
DEC					APR				
11...	1300	72	150	0.5	11...	1225	362	175	9.0
JAN					18...	1240	685	106	8.5
17...	1310	27	157	2.5	MAY				
FEB					30...	1340	1160	59	11.5
06...	1310	41	146	1.5	AUG				
MAR					02...	1320	136	90	20.5
26...	1340	137	201	7.0	22...	1015	89	112	17.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR					
25...	1430	950	33	85	81
MAY					
24...	1215	1300	69	242	61
AUG					
28...	1620	22	2	0.09	--

09243700 MIDDLE CREEK NEAR OAK CREEK, CO

LOCATION.--Lat 40°23'08", long 106°59'33", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.13, T.5 N., R.86 W., Routt County, Hydrologic Unit 1450001, on left bank 1.1 mi above mouth of Foidei Creek and 13.5 mi northwest of Oak Creek.

DRAINAGE AREA.--23.5 mi².

PERIOD OF RECORD.--October 1975 to September 1981, April 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,720 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 13, and Dec. 2 to Mar. 26. Records fair except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years (water years 1976-81, 83-90), 4.28 ft³/s; 3,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 329 ft³/s, May 14, 1984, gage height, 4.08 ft, from rating curve extended above 77 ft³/s; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 2	2315	*6.1	*1.58				

No flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.13	.36	.23	.55	.80	3.8	3.0	1.0	.00	.00	.00
2	.00	.13	.38	.23	.74	.80	4.0	2.9	1.2	.00	.00	.00
3	.00	.16	.38	.22	.70	.80	4.4	2.8	.91	.00	.00	.00
4	.00	.18	.40	.22	.69	.75	4.6	2.9	.74	.00	.00	.00
5	.00	.20	.40	.21	.64	.80	5.0	3.0	.61	.03	.00	.00
6	.00	.25	.42	.28	.64	.85	4.6	2.5	.65	.00	.00	.00
7	.00	.29	.42	.30	.64	.90	4.1	2.4	.52	.00	.00	.00
8	.00	.23	.44	.40	.68	.85	4.0	2.4	.46	.00	.00	.00
9	.00	.19	.44	.42	.66	.90	4.0	2.5	.42	.85	.00	.00
10	.00	.20	.46	.49	.64	.85	3.9	2.6	.37	.82	.00	.00
11	.00	.19	.46	.49	.65	.90	3.1	2.1	.45	.36	.00	.00
12	.00	.18	.46	.55	.70	.80	3.3	2.4	1.3	.19	.00	.00
13	.00	.18	.46	.86	.70	.80	3.1	2.5	1.7	.17	.00	.00
14	.00	.17	.38	1.1	.80	.80	3.1	2.2	.89	.14	.00	.00
15	.00	.19	.32	.86	.75	.85	2.8	2.2	.64	.13	.00	.00
16	.00	.20	.28	.58	.80	.90	2.9	3.1	.51	.10	.00	.00
17	.00	.19	.32	.52	.80	.95	2.9	2.8	.48	.07	.00	.00
18	.00	.20	.28	.71	.87	1.0	3.0	2.1	.36	.03	.00	.00
19	.00	.19	.28	.70	.80	1.1	2.7	1.8	.26	.00	.00	.00
20	.00	.19	.28	.42	.70	1.2	2.4	1.6	.21	.01	.00	.00
21	.00	.19	.28	.38	.90	1.3	2.4	1.5	.22	.53	.00	.00
22	.00	.18	.32	.46	1.2	1.4	2.1	1.4	.21	.26	.00	.00
23	.00	.17	.36	.47	.75	1.5	2.1	1.4	.18	.11	.00	.00
24	.00	.19	.38	.43	.85	2.0	2.2	1.2	.16	.08	.00	.00
25	.00	.20	.38	.38	.85	2.5	3.6	.92	.13	.06	.00	.00
26	.00	.24	.40	.36	.85	3.0	4.0	1.0	.12	.01	.00	.00
27	.00	.24	.42	.37	.85	3.4	3.4	1.0	.09	.00	.00	.00
28	.00	.27	.38	.37	.80	3.1	2.8	.93	.05	.00	.00	.00
29	.00	.36	.30	.32	---	3.2	3.1	1.1	.00	.00	.00	.00
30	.03	.36	.26	.34	---	3.2	3.0	1.4	.00	.00	.00	.00
31	.09	---	.24	.41	---	3.2	---	1.2	---	.00	.00	---
TOTAL	0.12	6.24	11.34	14.08	21.20	45.40	100.4	62.85	14.84	3.95	0.00	0.00
MEAN	.004	.21	.37	.45	.76	1.46	3.35	2.03	.49	.13	.000	.000
MAX	.09	.36	.46	1.1	1.2	3.4	5.0	3.1	1.7	.85	.00	.00
MIN	.00	.13	.24	.21	.55	.75	2.1	.92	.00	.00	.00	.00
AC-FT	.2	12	22	28	42	90	199	125	29	7.8	.00	.00

CAL YR 1989 TOTAL 683.59 MEAN 1.87 MAX 18 MIN .00 AC-FT 1360
WTR YR 1990 TOTAL 280.42 MEAN .77 MAX 5.0 MIN .00 AC-FT 556

GREEN RIVER BASIN

09243800 FOIDEL CREEK NEAR OAK CREEK, CO

LOCATION.--Lat 40°20'45", long 107°05'04", in NW¼SW¼ sec.31, T.5 N., R.86 W., Routt County, Hydrologic Unit 14050001, on right bank 2.3 mi downstream from Reservoir No. 1, 6.9 mi upstream from mouth, and 8.7 mi northwest of Oak Creek.

DRAINAGE AREA.--8.61 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to October 1981, April 1982 to September 1983, October 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,880 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-5, Oct. 10 to Nov. 1, Nov. 4 to Apr. 4. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--13 years (water years 1976-81, 1983, 1985-90), 1.42 ft³/s; 1,030 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55 ft³/s, Apr. 21, 1980, gage height, 3.38 ft; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4.2 ft³/s, at 0430 Apr. 9, gage height, 1.54 ft; minimum daily, 0.06 ft³/s, Aug. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.66	.44	.28	.41	.96	4.3	1.7	1.2	.33	.16	.55
2	.33	.62	.52	.24	.60	.96	4.5	1.6	1.1	.36	.15	.57
3	.46	.65	.51	.24	.56	.96	4.5	1.5	1.1	.41	.15	.57
4	.46	1.1	.39	.24	.55	.86	4.5	1.4	1.0	.46	.14	.53
5	.33	.87	.59	.25	.50	.96	3.7	1.3	.87	.45	.10	.54
6	.30	.91	.95	.32	.50	1.1	3.7	1.3	.77	.41	.12	.52
7	.28	.96	.82	.34	.50	1.2	3.2	1.3	.66	.43	.12	.47
8	.30	.79	.66	.24	.58	1.1	3.6	1.3	.64	.57	.12	.43
9	.39	.76	.59	.28	.54	1.2	4.0	1.3	.66	.75	.11	.39
10	.40	.80	.64	.35	.50	.86	3.6	1.3	.64	.74	.08	.36
11	.82	.68	.73	.35	.52	.96	3.4	1.4	.68	.61	.09	.30
12	.53	.68	.73	.41	.76	.94	3.0	1.6	1.1	.50	.10	.28
13	.52	.68	.72	.72	.76	.92	2.7	1.7	1.3	.44	.07	.27
14	.52	.64	.68	.92	.96	.88	2.4	1.6	1.1	.43	.07	.30
15	.56	.55	.62	.72	.86	.90	2.2	1.6	.95	.37	.06	.26
16	.53	.47	.57	.44	.96	.80	2.0	1.9	.84	.35	.09	.25
17	.56	.80	.61	.38	.96	.80	1.8	1.8	.72	.24	.13	.36
18	.58	.52	.57	.57	1.1	.80	1.7	1.6	.68	.20	.12	.31
19	.59	.62	.57	.56	.96	.90	1.6	1.4	.61	.20	.11	.29
20	.63	.62	.57	.28	.76	.90	1.4	1.4	.58	.37	.11	.30
21	.63	.62	.57	.24	1.5	.90	1.3	1.4	.56	1.0	.09	.28
22	.67	.53	.56	.32	2.1	1.2	1.3	1.3	.50	.75	.10	.25
23	1.1	.44	.54	.33	.86	1.5	1.2	1.3	.47	.59	.11	.22
24	.59	.61	.52	.29	1.1	1.4	1.2	1.2	.47	.42	.12	.41
25	.60	.64	.50	.24	1.1	1.6	1.5	.98	.47	.44	.10	.28
26	.65	.86	.48	.22	1.1	1.8	2.1	1.0	.46	.37	.09	.29
27	.64	.53	.46	.23	1.1	2.1	2.1	1.0	.39	.31	.10	.26
28	.65	1.2	.44	.23	.96	2.3	1.7	1.0	.38	.25	.10	.22
29	.64	.63	.40	.18	---	3.5	1.7	1.1	.34	.20	.14	.24
30	.62	.51	.36	.20	---	4.0	1.9	1.2	.34	.18	.23	.22
31	.57	---	.32	.27	---	4.1	---	1.2	---	.17	.28	---
TOTAL	16.80	20.95	17.63	10.88	23.66	43.36	77.8	42.68	21.58	13.30	3.66	10.52
MEAN	.54	.70	.57	.35	.84	1.40	2.59	1.38	.72	.43	.12	.35
MAX	1.1	1.2	.95	.92	2.1	4.1	4.5	1.9	1.3	1.0	.28	.57
MIN	.28	.44	.32	.18	.41	.80	1.2	.98	.34	.17	.06	.22
AC-FT	33	42	35	22	47	86	154	85	43	26	7.3	21

CAL YR 1989 TOTAL 574.43 MEAN 1.57 MAX 26 MIN .02 AC-FT 1140
WTR YR 1990 TOTAL 302.82 MEAN .83 MAX 4.5 MIN .06 AC-FT 601

09243800 FOIDEL CREEK NEAR OAK CREEK, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1975 to September 1983, October 1984 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1976 to September 1981, April 1982 to September 1983, March 1986 to September 1988.

WATER TEMPERATURES: May 1976 to September 1981, April 1982 to September 1983, March 1986 to September 1988.

INSTRUMENTATION.--Water-quality monitor May 1976 to September 1981, April 1982 to September 1983, March 1986 to September 1988.

REMARKS.--Unpublished maximum and minimum specific conductance data for periods of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 3,080 microsiemens Dec. 16, 1987; minimum, 200 microsiemens Apr. 21, 22, 1980.

WATER TEMPERATURES: Maximum, 31.5°C July 30, 1983; minimum, 0.0°C during winter period when flowing each year.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 3,140 microsiemens was measured December 12, 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
DEC 06...	1505	1.0	2960	8.2	0.0	11.4	1800	360	220	69	0.7
APR 24...	1600	2.0	2320	8.2	11.5	8.6	1400	280	170	60	0.7
MAY 24...	0920	1.4	2700	8.1	12.0	7.5	1700	330	210	60	0.6
AUG 28...	1345	0.10	2960	8.2	18.5	8.4	1900	330	260	62	0.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
DEC 06...	6.9	307	1800	6.1	0.1	8.0	2650	3.61	7.17	<0.1
APR 24...	5.7	207	1200	6.4	0.7	9.9	1860	2.53	10.0	<0.1
MAY 24...	5.5	302	1600	2.5	0.3	3.1	2390	3.25	9.04	<0.1
AUG 28...	7.3	219	1600	8.3	1.0	2.5	2400	3.27	0.65	<0.1

GREEN RIVER BASIN

09243800 FOIDEL CREEK NEAR OAK CREEK, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)
OCT					
06...	1140	0.30	3120	--	10.5
DEC					
12...	0850	0.73	3140	8.2	0.5
JAN					
02...	1125	0.24	--	8.1	1.5
FEB					
07...	1100	0.50	3040	8.2	3.0
APR					
04...	1320	3.5	--	8.3	11.0
30...	1140	2.0	2310	8.2	9.0
JUN					
14...	1245	1.1	2860	8.2	21.0
JUL					
11...	1200	0.65	2830	8.0	21.5
SEP					
10...	1035	0.36	2930	8.5	--

09243900 FOIDEL CREEK AT MOUTH, NEAR OAK CREEK, CO

LOCATION.--Lat 40°23'25", long 106°59'39", in SE¼SE¼ sec.14, T.5 N., R.86 W., Routt County, Hydrologic Unit 14050001, on left bank 0.9 mi upstream from mouth and 13.6 mi northwest of Oak Creek.

DRAINAGE AREA.--17.5 mi².

PERIOD OF RECORD.--October 1975 to September 1981, June 1982 to current year.

REVISED RECORDS.--WDR CO-78-3: 1976 (M), 1976.

GAGE.--Water-stage recorder. Elevation of gage is 6,730 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 18-23, 26, Feb. 21, 22, Mar. 13, 14 and Mar. 24-30. Records good except for estimated daily discharges, which are poor, and the winter period, which is fair. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years (water years 1976-81, 1983-90), 3.36 ft³/s; 2,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90 ft³/s, Apr. 22, 1980, gage height, 5.18 ft; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13 ft³/s at 2030 Mar. 31, gage height, 2.64 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.53	.34	.63	.79	1.6	10	3.0	.93	.00	.00	.00
2	.16	.49	.42	.57	.98	1.6	9.5	2.4	1.0	.00	.00	.00
3	.29	.85	.41	.60	.94	1.5	8.2	1.9	1.1	.00	.00	.00
4	.29	1.0	.29	.60	.93	1.4	8.2	1.7	.73	.00	.00	.00
5	.16	.74	.49	.65	.88	1.5	7.6	1.5	.55	.00	.00	.00
6	.13	.78	.85	.72	.88	1.6	6.9	1.2	.41	.00	.00	.00
7	.12	.83	.72	.74	.84	1.6	6.3	1.1	.28	.00	.00	.00
8	.13	.66	.57	.64	.92	1.5	6.0	1.1	.24	.01	.00	.00
9	.16	.63	.50	.66	.84	1.5	6.1	1.1	.26	.39	.00	.00
10	.23	.67	.55	.73	.79	1.4	6.2	1.1	.27	.43	.00	.00
11	.66	.55	.64	.73	.76	1.4	5.2	1.2	.21	.49	.00	.00
12	.37	.55	.83	.79	.95	1.4	4.4	1.9	.65	.48	.00	.00
13	.36	.55	.71	1.1	.96	1.3	4.0	2.7	1.6	.14	.00	.00
14	.36	.51	.67	1.3	1.1	1.3	3.5	2.0	1.1	.13	.00	.00
15	.40	.42	.63	1.1	1.1	1.3	2.9	1.8	.42	.07	.00	.00
16	.38	.34	.60	.82	1.1	1.2	2.9	2.0	.26	.01	.00	.00
17	.41	.67	.66	.76	1.1	1.2	2.5	2.3	.17	.00	.00	.00
18	.43	.39	.60	.95	1.2	1.2	2.3	2.0	.09	.00	.00	.00
19	.44	.50	.60	.94	1.0	1.3	2.1	1.5	.04	.00	.00	.00
20	.48	.50	.60	.66	.86	1.3	1.8	1.2	.03	.00	.00	.00
21	.49	.50	.60	.62	1.2	1.3	1.6	1.1	.00	.00	.00	.00
22	.53	.41	.65	.70	1.5	1.6	1.5	1.1	.00	.57	.00	.00
23	.93	.32	.70	.71	1.6	1.9	1.3	.87	.00	.65	.00	.00
24	.45	.49	.72	.67	1.7	2.1	1.3	.72	.00	.57	.00	.00
25	.46	.52	.72	.62	1.8	3.5	2.0	.55	.00	.53	.00	.00
26	.52	.75	.80	.60	1.7	5.0	2.9	.43	.02	.43	.00	.00
27	.51	.42	.96	.61	1.7	6.0	3.2	.40	.00	.27	.00	.00
28	.52	1.1	.83	.61	1.6	7.0	3.2	.44	.00	.10	.00	.00
29	.51	.54	.76	.56	---	8.0	2.8	.59	.00	.00	.00	.00
30	.49	.40	.71	.58	---	9.0	3.1	.87	.00	.00	.00	.01
31	.44	---	.65	.65	---	10	---	1.1	---	.00	.00	---
TOTAL	11.99	17.61	19.78	22.62	31.72	83.5	129.5	42.87	10.36	5.27	0.00	0.01
MEAN	.39	.59	.64	.73	1.13	2.69	4.32	1.38	.35	.17	.000	.000
MAX	.93	1.1	.96	1.3	1.8	10	10	3.0	1.6	.65	.00	.01
MIN	.12	.32	.29	.56	.76	1.2	1.3	.40	.00	.00	.00	.00
AC-FT	24	35	39	45	63	166	257	85	21	10	.00	.02

CAL YR 1989 TOTAL 936.42 MEAN 2.57 MAX 42 MIN .00 AC-FT 1860

WTR YR 1990 TOTAL 375.23 MEAN 1.03 MAX 10 MIN .00 AC-FT 744

RAINFALL RECORDS

REMARKS.--Unpublished rainfall data for water years 1978-86 and 1989 are available in district office.

[illegible]

09245000 ELKHEAD CREEK NEAR ELKHEAD, CO

LOCATION.--Lat 40°40'11", long 107°17'04", in NW¼NE¼ sec.8, T.8 N., R.88 W., Routt County, Hydrologic Unit 14050001, on right bank 0.2 mi upstream from North Fork Elkhead Creek, 4.5 mi northwest of Elkhead, and 12 mi north of Hayden.

DRAINAGE AREA.--64.2 mi².

PERIOD OF RECORD.--January to November 1910 and May to November 1920 (monthly discharge only, published in WSP 1313; published as "at Hayes Ranch"), April 1953 to current year.

REVISED RECORDS.--WSP 1733: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,845 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 30, 1920, nonrecording gage or water-stage recorder 675 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 5-7, and Nov. 3, 4. Records fair except for estimated daily discharges and winter period, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--37 years (water years 1954-90), 56.0 ft³/s; 40,570 acre-ft/yr. The figure published in the 1989 report was in error; the correct figure is 36 years, 56.8 ft³/s, 41,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,850 ft³/s, May 20, 1984, gage height, 7.58 ft, from rating curve extended above 1,500 ft³/s, on basis of slope area determination of peak flow; no flow Sept. 1, 1954, Sept. 12-19, 24, 1955, Aug. 27-29, 1961, Aug. 14-19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 18	2400	*347	*4.67				

Minimum daily, 0.29 ft³/s, Sept. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.5	4.3	3.8	2.7	5.5	12	99	68	7.8	1.6	1.9
2	1.5	2.0	4.0	3.8	2.7	6.1	18	103	66	7.3	1.4	1.7
3	1.9	2.5	3.9	3.7	2.7	7.0	30	111	59	6.6	1.3	1.7
4	1.5	3.0	3.9	3.3	2.9	9.0	36	113	53	6.4	1.1	1.6
5	1.5	3.7	4.8	3.1	2.9	11	52	112	51	6.4	1.0	1.5
6	1.4	4.5	5.3	3.3	2.8	9.6	73	133	49	6.0	.89	1.5
7	1.3	4.7	4.8	3.1	2.9	8.0	90	171	45	5.5	.77	1.3
8	1.1	3.2	5.3	3.0	2.8	9.5	91	151	42	7.0	.81	1.0
9	1.3	5.2	5.1	3.1	2.7	9.9	103	110	37	12	1.0	.94
10	1.5	5.1	5.3	3.1	2.7	12	83	94	35	11	1.3	.90
11	1.8	4.9	5.8	3.2	2.9	15	115	108	41	8.2	1.2	.73
12	2.1	5.1	6.9	3.1	2.9	14	154	107	87	6.3	1.3	.52
13	2.6	5.2	8.2	3.1	2.9	10	157	112	93	5.0	1.6	.37
14	2.8	5.5	7.1	3.1	2.9	12	162	103	66	4.5	2.0	.33
15	3.6	2.8	7.0	3.2	2.9	22	179	112	51	4.0	2.1	.29
16	4.4	3.4	7.0	3.2	2.9	15	233	96	44	3.7	2.4	.31
17	4.6	5.2	6.7	3.0	2.9	15	241	84	42	3.4	3.0	.58
18	4.3	2.9	6.2	2.8	2.9	14	245	90	37	3.2	5.1	2.6
19	3.9	3.9	6.2	2.9	2.8	16	249	87	31	2.8	5.7	3.4
20	4.0	4.2	5.7	2.9	2.9	25	234	88	27	4.0	4.7	2.9
21	4.2	3.6	5.6	2.7	2.9	16	247	85	25	10	4.0	2.1
22	5.6	3.2	5.1	2.6	2.9	16	248	91	22	5.3	3.6	1.7
23	6.9	2.9	4.8	2.7	2.9	11	252	92	20	4.0	3.7	1.3
24	5.9	4.1	4.8	2.7	3.1	19	247	98	17	3.5	3.7	1.2
25	5.5	4.2	4.6	2.7	3.6	22	211	91	15	4.5	4.2	1.0
26	8.0	4.3	4.2	2.7	4.3	33	167	82	14	3.9	3.9	1.2
27	9.0	2.9	4.0	2.7	5.1	9.9	117	74	13	2.8	3.6	1.2
28	5.6	4.1	4.0	2.5	5.7	11	124	70	11	2.2	3.2	1.0
29	4.5	4.4	4.0	2.5	---	9.5	121	75	9.8	1.9	3.0	1.1
30	3.9	4.3	4.1	2.6	---	9.4	105	78	8.6	1.8	2.8	1.1
31	3.2	---	3.9	2.7	---	10	---	78	---	1.7	2.4	---
TOTAL	110.5	117.5	162.6	92.9	87.2	412.4	4396	3098	1179.4	162.7	78.37	38.97
MEAN	3.56	3.92	5.25	3.00	3.11	13.3	147	99.9	39.3	5.25	2.53	1.30
MAX	9.0	5.5	8.2	3.8	5.7	33	252	171	93	12	5.7	3.4
MIN	1.1	2.0	3.9	2.5	2.7	5.5	12	70	8.6	1.7	.77	.29
AC-FT	219	233	323	184	173	818	8720	6140	2340	323	155	77

CAL YR 1989 TOTAL 8606.13 MEAN 23.6 MAX 314 MIN .10 AC-FT 17070
WTR YR 1990 TOTAL 9936.54 MEAN 27.2 MAX 252 MIN .29 AC-FT 19710

09246920 FORTIFICATION CREEK NEAR FORTIFICATION, CO

LOCATION.--Lat 40°44'38", long 107°32'25", in NW¼NW¼ sec. 18, T.9 N., R.90 W., Moffat County, Hydrologic Unit 14050001, on right bank, 4.5 mi south of Fortification.

DRAINAGE AREA.--40.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,520 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1 to Dec. 26, Jan. 13-18, Feb. 5-16, June 14-22, June 28 to July 18, and July 28 to Aug. 16. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--6 years, 11.6 ft³/s; 8,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 465 ft³/s, March 25, 1985, gage height, 4.64 ft; no flow many days, most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65 ft³/s at 1220 Mar. 11, gage height, 2.28 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.7	1.5	1.2	1.5	2.7	9.3	11	13	2.1	.12	.00
2	1.0	1.9	1.4	1.2	1.8	2.6	10	11	12	2.2	.12	.00
3	1.1	2.0	1.4	1.3	1.7	3.0	12	10	10	2.5	.18	.00
4	1.4	1.8	1.4	.77	2.1	6.7	12	12	9.9	2.3	.15	.00
5	1.5	1.7	1.4	1.2	2.0	8.6	11	15	12	2.0	.11	.00
6	1.4	1.6	1.4	1.1	2.1	12	11	19	15	1.8	.00	.00
7	1.4	1.5	1.5	1.0	2.2	13	11	30	14	2.0	.00	.00
8	1.5	1.6	1.5	1.2	2.1	11	13	25	12	2.3	.00	.00
9	1.5	1.5	1.5	1.3	2.1	7.6	16	13	12	2.0	.00	.00
10	1.4	1.5	1.4	1.5	2.1	10	12	10	12	1.7	.00	.00
11	1.3	1.4	1.3	2.1	2.1	39	11	12	16	1.5	.00	.00
12	1.1	1.4	1.3	2.1	2.1	37	11	12	24	1.3	.00	.00
13	1.0	1.4	1.3	2.1	2.1	21	11	12	17	1.1	.00	.00
14	1.0	1.3	1.3	1.9	2.0	11	9.4	12	18	.92	.00	.00
15	1.0	1.5	1.4	2.3	2.0	5.4	13	13	15	.80	.00	.00
16	1.0	2.0	1.4	2.3	2.0	5.7	18	12	12	.65	.00	.00
17	1.1	1.9	1.4	2.2	2.5	5.9	26	11	9.6	.64	.00	.00
18	1.0	2.0	1.3	1.4	2.1	6.0	21	13	10	.48	.00	.00
19	1.0	1.9	1.3	1.1	1.3	9.2	19	12	11	.49	.00	.00
20	1.1	1.2	1.3	1.1	1.3	21	24	13	11	.59	.00	.00
21	1.3	1.5	1.3	1.0	1.3	25	22	12	11	.56	.00	.00
22	1.4	1.7	1.3	.97	1.3	18	25	18	10	.54	.00	.00
23	1.4	1.9	1.2	.99	1.3	26	25	19	11	.39	.00	.00
24	1.3	1.8	1.2	.97	1.6	19	25	26	8.3	.43	.00	.00
25	1.1	1.6	1.2	.93	1.7	11	22	24	8.4	.75	.00	.00
26	1.1	1.5	1.3	.97	1.8	8.9	20	18	10	1.0	.00	.00
27	1.2	1.4	1.1	.98	2.8	12	14	13	12	.66	.00	.00
28	1.5	1.5	1.1	.94	3.1	11	12	12	3.1	.45	.00	.00
29	1.8	1.6	1.2	.99	---	11	11	13	2.7	.30	.00	.00
30	2.0	1.5	1.3	1.1	---	7.7	11	13	2.4	.20	.00	.00
31	1.9	---	1.3	1.4	---	7.6	---	15	---	.14	.00	---
TOTAL	39.8	48.8	41.2	41.61	54.1	395.6	467.7	461	344.4	34.79	0.68	0.00
MEAN	1.28	1.63	1.33	1.34	1.93	12.8	15.6	14.9	11.5	1.12	.022	.000
MAX	2.0	2.0	1.5	2.3	3.1	39	26	30	24	2.5	.18	.00
MIN	1.0	1.2	1.1	.77	1.3	2.6	9.3	10	2.4	.14	.00	.00
AC-FT	79	97	82	83	107	785	928	914	683	69	1.3	.00

CAL YR 1989 TOTAL 1345.47 MEAN 3.69 MAX 37 MIN .00 AC-FT 2670
WTR YR 1990 TOTAL 1929.68 MEAN 5.29 MAX 39 MIN .00 AC-FT 3830

09246920 FORTIFICATION CREEK NEAR FORTIFICATION, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1985 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)
DEC 05...	1435	1.4	380	8.0	0.0	10.9	140	38	12	33
APR 25...	1020	24	148	8.0	6.0	9.4	59	17	4.1	8.4
MAY 24...	1610	25	98	7.8	15.5	7.3	39	11	2.7	4.9

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED PER AC-FT)
DEC 05...	1	1.6	175	27	5.3	0.2	19	241	0.33
APR 25...	0.5	0.8	65	8.9	1.0	<0.1	13	92	0.13
MAY 24...	0.3	0.7	44	4.4	1.6	<0.1	13	65	0.09

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 05...	0.91	<0.1	<0.1	<0.01	--	0.50	0.07	0.08	4.3
APR 25...	5.97	<0.1	<0.1	0.03	0.57	0.60	0.05	0.05	8.2
MAY 24...	4.37	<0.1	<0.1	0.02	0.68	0.70	0.10	0.05	10

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
DEC 05...	590	<1	<1	<100	<10	<1	2	1	2	260
APR 25...	4900	<1	1	100	<10	<1	6	2	5	6200

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
DEC 05...	2	10	200	<0.1	1	3	1	<1	280	<10
APR 25...	5	10	150	<0.1	<1	7	<1	<1	160	20

09246920 FORTIFICATION CREEK NEAR FORTIFICATION, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					APR				
26...	1108	1.1	403	4.5	13...	1240	12	216	8.5
NOV					MAY				
14...	1100	1.3	400	3.5	10...	1422	10	382	9.5
JAN					JUN				
17...	1135	2.3	325	0.5	22...	1300	10	184	19.0
FEB					JUL				
07...	1230	2.2	363	0.5	17...	1300	0.64	404	23.5
MAR									
01...	1100	2.0	367	0.5					
23...	1050	13	295	4.0					

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC				
05...	1435	1.4	84	0.32
05...	1436	1.4	76	0.29
APR				
25...	1020	24	272	18
MAY				
24...	1610	25	212	14

LOCATION.--Lat 40°28'51", long 107°36'49", in SW1/4 sec. 16, T.6 N., R.91 W., Moffat County, Hydrologic Unit 14050001, on left bank 0.5 mi downstream from state highway 13-789 bridge, and 3.3 mi southwest of Craig.

PERIOD OF RECORD.--June 1975 to September 1980 (discharge measurements only), October 1984 to current year.

REMARKS.--Estimated daily discharges: Dec. 21 to Mar. 20. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation, Colorado Ute Power Plants at Hayden and Craig, transbasin diversions, storage reservoirs, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,300 ft³/s, May 6, 1985, gage height, 9.68 ft; minimum daily, 1.3 ft³/s, Sept. 1, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,150 ft³/s at 2330 June 12, gage height, 7.76 ft; minimum daily, 28 ft³/s, Aug. 16.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	246	133	180	160	250	1040	1530	3590	1080	225	43
2	96	243	128	170	160	270	1240	1470	3340	962	209	47
3	95	226	125	160	150	300	1380	1460	2760	859	168	64
4	78	220	143	160	150	400	1500	1430	2790	947	127	56
5	79	261	164	160	150	500	1450	1530	3720	1040	138	123
6	99	271	181	160	150	560	1410	1590	4470	787	121	222
7	103	272	176	160	150	500	1280	1990	4820	687	104	237
8	101	272	143	160	160	520	1260	2360	4660	652	77	198
9	110	255	160	150	160	560	1470	2190	4630	841	63	197
10	120	251	184	150	170	600	1510	1810	4450	892	57	205
11	118	237	141	150	180	650	1270	1710	4610	753	41	202
12	100	213	137	150	190	610	1240	1880	5250	607	41	203
13	94	190	165	150	200	580	1300	1820	5500	498	40	199
14	88	196	197	160	210	500	1260	1730	4330	457	41	141
15	92	192	182	160	210	450	1330	1710	3880	464	33	117
16	100	144	184	160	210	420	1630	1810	3420	423	28	111
17	110	148	204	160	200	390	1880	1640	2930	402	36	108
18	119	163	204	170	200	380	1940	1550	2750	377	43	125
19	150	153	184	166	210	386	2070	1650	2830	364	110	122
20	157	159	201	160	220	450	2110	1700	2640	331	105	180
21	169	162	204	170	230	557	2100	1830	2480	344	87	186
22	180	153	200	160	240	621	2260	2070	2420	458	84	182
23	180	156	190	160	230	721	2400	2450	2360	398	87	173
24	193	144	180	160	220	834	2490	3030	2300	329	96	156
25	201	148	180	160	200	826	2410	3560	2180	342	100	149
26	191	195	180	170	210	762	2320	3630	2000	454	90	149
27	226	184	180	170	220	871	2010	3200	1900	378	79	147
28	255	130	190	160	230	938	1760	3160	1740	319	71	142
29	263	109	190	160	---	1030	1750	3380	1500	288	54	145
30	244	132	190	160	---	1080	1700	3270	1290	265	49	148
31	246	---	190	160	---	1010	---	3180	---	233	43	---
TOTAL	4457	5825	5410	4986	5370	18526	50770	67320	97540	17231	2647	4477
MEAN	144	194	175	161	192	598	1692	2172	3251	556	85.4	149
MAX	263	272	204	180	240	1080	2490	3630	5500	1080	225	237
MIN	78	109	125	150	150	250	1040	1430	1290	233	28	43
AC-FT	8840	11550	10730	9890	10650	36750	100700	133500	193500	34180	5250	8880
CAL YR 1989	TOTAL 267735 MEAN 734 MAX 4000 MIN 25 AC-FT 531100											

09249750 WILLIAMS FORK RIVER AT MOUTH NEAR HAMILTON, CO.

LOCATION.--Lat 40°26'14", Long 107°38'50", in SE¼NW¼ sec.31, T.6 N., R.91 W., Moffat County, Hydrologic Unit 14050001, on left bank at coal mine service road crossing, 2,300 ft upstream from confluence with Yampa River, and 6.1 mi north-northeast of Hamilton, Co.

DRAINAGE AREA.--419 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1984 to current year.

GAGE.--Water stage recorder. Elevation of gage is 6,170 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 3-9, 13, 21-22. Records good except for estimated daily discharges which are poor.

AVERAGE DISCHARGE.--6 years, 214 ft³/s; 155,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 4,750 ft³/s, May 16, 1984, gage height, 9.96 ft; minimum daily, 14 ft³/s, Sept. 15-16, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	1730	*791	*5.11				

Minimum daily, 14 ft³/s, Sept. 15-16.DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	44	29	39	41	54	87	206	498	86	45	23
2	26	46	33	38	41	69	100	197	437	80	45	29
3	28	34	34	37	41	54	121	206	382	79	44	31
4	26	39	35	37	40	60	148	224	431	82	43	34
5	28	52	39	38	39	67	158	228	518	87	39	39
6	32	49	43	38	39	68	152	267	567	77	36	38
7	34	51	46	40	39	65	152	403	583	80	34	41
8	37	47	41	41	41	61	157	474	548	85	34	32
9	40	40	40	43	42	65	181	380	516	118	34	28
10	39	48	43	44	42	70	184	312	471	113	29	26
11	39	47	40	45	42	87	147	374	498	85	30	24
12	37	47	38	45	44	88	154	369	649	70	28	23
13	36	45	38	44	45	76	166	306	690	63	24	19
14	34	46	40	44	43	58	163	293	492	60	27	16
15	35	43	42	43	41	60	177	354	410	59	28	14
16	38	27	41	41	40	68	246	364	366	56	29	14
17	42	33	40	40	40	63	287	310	330	53	36	18
18	47	45	39	39	37	69	291	300	296	48	39	24
19	43	41	38	36	39	66	277	328	271	44	38	35
20	40	46	40	38	41	77	288	399	255	50	32	26
21	39	47	42	39	43	90	315	437	235	52	29	25
22	43	44	42	41	45	102	353	532	215	53	31	25
23	44	37	41	43	46	114	407	589	202	50	31	21
24	44	38	40	39	47	122	389	691	184	48	33	22
25	43	48	40	37	46	113	348	677	164	59	30	23
26	42	43	39	36	47	100	312	614	146	65	28	28
27	46	47	37	38	50	102	262	524	127	56	26	31
28	47	38	37	39	52	107	221	483	113	50	23	31
29	48	28	38	39	---	111	219	515	101	49	22	32
30	43	28	40	39	---	102	222	477	93	51	22	41
31	39	---	39	40	---	90	---	451	---	45	23	---
TOTAL	1186	1268	1214	1240	1193	2498	6684	12284	10788	2053	992	813
MEAN	38.3	42.3	39.2	40.0	42.6	80.6	223	396	360	66.2	32.0	27.1
MAX	48	52	46	45	52	122	407	691	690	118	45	41
MIN	26	27	29	36	37	54	87	197	93	44	22	14
AC-FT	2350	2520	2410	2460	2370	4950	13260	24370	21400	4070	1970	1610

CAL YR 1989 TOTAL 49189 MEAN 135 MAX 914 MIN 15 AC-FT 97570
WTR YR 1990 TOTAL 42213 MEAN 116 MAX 691 MIN 14 AC-FT 83730

09249750 WILLIAMS FORK AT MOUTH NEAR HAMILTON, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1975 to September 1980, December 1985 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
DEC 05...	1145	46	659	8.4	0.5	11.4	290	63	33
MAY 25...	1445	658	180	8.2	9.0	9.1	82	22	6.6
SEP 06...	1340	39	759	8.3	21.0	7.2	320	65	38

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
DEC 05...	40	1	1.8	229	140	4.8	0.2	15	435
MAY 25...	4.6	0.2	0.8	79	18	1.8	<0.1	9.4	111
SEP 06...	43	1	4.0	215	200	9.5	0.2	13	502

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
DEC 05...	0.59	54.0	<0.01	<0.1	<0.01	0.30	<0.01	0.01
MAY 25...	0.15	197	<0.01	<0.1	0.03	0.40	<0.01	<0.01
SEP 06...	0.68	52.8	<0.01	<0.1	<0.01	0.40	<0.01	<0.01

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
MAY 25...	7200	2	2	<100	<10	1	10	5	15	15000

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY 25...	7	10	290	<0.1	3	16	<2	<1	140	80

GREEN RIVER BASIN

09249750 WILLIAMS FORK AT MOUTH NEAR HAMILTON, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					MAY				
04...	1600	26	729	14.5	17...	1115	315	296	10.0
JAN					24...	1540	774	306	10.0
17...	1321	40	625	1.5	JUN				
MAR					22...	1355	211	304	20.5
01...	1314	54	286	0.5	JUL				
APR					18...	1545	48	314	23.5
11...	1203	144	363	9.0					

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
DEC					SEP				
05...	1145	46	53	6.6	06...	1340	39	213	22
MAY									
25...	1445	658	797	1420					

09250507 WILSON CREEK ABOVE TAYLOR CREEK, NEAR AXIAL, CO

LOCATION.--Lat 40°18'53", long 107°47'58", in NW¼SW¼ sec.14, T.4 N., R.93 W., Moffatt County, Hydrologic Unit 14050002, on left bank about 200 ft upstream from Moffatt County Road 17, about 50 ft upstream from confluence of Taylor Creek, and 2.4 mi north of Axial.

DRAINAGE AREA.--20.0 mi².

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,315 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 1 to Mar. 17. Records fair except for Oct. 1 to Mar. 17, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--10 years, 5.16 ft³/s; 3,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 352 ft³/s, May 14, 1984, gage height, 8.71 ft, on basis of indirect measurement of peak flow; no flow, June 5, July 4-9, and Aug. 2-3, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3.1 ft³/s, Nov. 23; minimum daily, 0.10 ft³/s, Aug. 27-28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.1	.58	.84	.60	.74	.57	1.3	1.2	.42	.35	.52
2	.89	1.0	.56	.82	.60	.72	.59	1.2	1.5	.50	.48	.69
3	.98	1.9	.54	.80	.60	.70	.65	1.1	1.1	.53	.45	.77
4	1.1	1.1	.49	.80	.60	.70	.67	1.3	.99	1.0	.42	.44
5	.94	1.2	.45	.80	.60	.68	1.1	1.4	.95	.86	.42	.40
6	.78	1.3	.40	.80	.60	.68	.70	.88	.80	.68	.40	.42
7	.74	1.2	.50	.80	.58	.66	.70	.64	.79	.85	.41	.25
8	.77	.89	.58	.82	.58	.64	.84	.70	.90	1.3	.33	.20
9	.96	1.4	.58	.83	.58	.60	1.9	.70	.89	1.1	.36	.26
10	1.1	1.4	.58	.82	.60	.55	1.6	.66	.94	.99	.35	.25
11	1.2	1.3	.59	.82	.62	.52	1.4	.98	1.0	.69	.25	.25
12	1.1	1.3	.59	.82	.66	.50	1.4	1.2	2.0	.63	.27	.22
13	1.1	1.3	.60	.80	.70	.48	1.4	1.6	1.4	.68	.25	.21
14	1.2	1.3	.60	.80	.76	.46	1.4	1.3	.57	.69	.23	.25
15	1.2	1.6	.60	.78	.80	.46	1.4	1.5	.45	.66	.22	.23
16	1.0	1.8	.61	.78	.86	.46	1.5	1.7	.54	.70	.30	.33
17	.77	1.7	.64	.76	.89	.48	1.6	1.2	.70	.57	.92	.46
18	.78	2.6	.66	.76	.86	.48	1.6	1.1	.50	.50	.64	.45
19	.81	2.0	.70	.74	.84	.63	1.6	1.1	.38	.60	.35	.46
20	.92	2.0	.72	.72	.84	.54	1.5	1.1	.56	.82	.23	.44
21	1.2	2.0	.74	.72	.82	.60	1.5	1.1	.51	.64	.31	.44
22	1.1	2.2	.76	.72	.78	.57	1.5	1.0	.54	.60	.31	.33
23	.94	3.1	.78	.70	.78	.75	.91	1.0	.52	.65	.39	.34
24	1.0	1.4	.81	.70	.78	.72	1.2	.96	.48	.64	.35	.29
25	.97	2.2	.82	.70	.76	.47	1.8	.98	.47	.69	.18	.32
26	.92	1.9	.82	.70	.76	.51	1.5	1.1	.55	.49	.16	.35
27	.86	1.9	.84	.68	.74	.50	1.1	1.1	.48	.41	.10	.39
28	.89	.80	.84	.66	.74	.92	1.4	1.1	.46	.30	.10	.41
29	.72	.96	.86	.64	---	1.1	1.6	1.0	.46	.33	.16	.48
30	.73	.60	.86	.62	---	.65	1.5	1.1	.43	.31	.15	.50
31	.94	---	.86	.60	---	.54	---	1.1	---	.32	.23	---
TOTAL	29.61	46.45	20.56	23.35	19.93	19.01	38.13	34.20	23.06	20.15	10.07	11.35
MEAN	.96	1.55	.66	.75	.71	.61	1.27	1.10	.77	.65	.32	.38
MAX	1.2	3.1	.86	.84	.89	1.1	1.9	1.7	2.0	1.3	.92	.77
MIN	.72	.60	.40	.60	.58	.46	.57	.64	.38	.30	.10	.20
AC-FT	59	92	41	46	40	38	76	68	46	40	20	23

CAL YR 1989 TOTAL 595.29 MEAN 1.63 MAX 17 MIN .00 AC-FT 1180
WTR YR 1990 TOTAL 295.87 MEAN .81 MAX 3.1 MIN .10 AC-FT 587

09250510 TAYLOR CREEK AT MOUTH, NEAR AXIAL, CO

LOCATION.--Lat 40°18'48", long 107°47'57", in NW¼SW¼ sec.14, T.4 N., R.93 W., Moffatt County, Hydrologic Unit 14050002, on right bank 475 ft upstream from confluence with Wilson Creek, about 1,000 ft southwest of Gossard ranch house, and 2 mi north of Axial.

DRAINAGE AREA.--7.22 mi².

REVISED RECORDS.--WDR CO-87-2: 1986 (M).

PERIOD OF RECORD.--Streamflow records, July 1975 to current year. Water-quality data available, July 1975 to September 1981.

GAGE.--Water-stage recorder. Elevation of gage is 6,300 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 28, 1980, gage 25 ft upstream at datum 1.00 ft, higher, Mar. 28, 1980 to Apr. 1, 1985 at same site at datum 1.08 ft, higher, Apr. 1, 1985 to Sept. 17, 1986 at same site at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 28 to Mar. 23 Records fair except for estimated daily discharges, which are poor. No diversions upstream from station. Low dam to prevent erosion, 75 ft upstream. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--15 years, 0.55 ft³/s; 398 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41 ft³/s, May 15, 1984, gage height, 3.33 ft, present datum; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1.6 ft³/s at 1200 Jan. 9, gage height, 0.95 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
2	.00	.01	.00	.00	.00	.00	.00	.01	.20	.00	.02	.00
3	.00	.01	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00
4	.01	.01	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
5	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.01	.00	.00	.00	.00	.00	.00	.01	.06	.00	.00	.00
8	.01	.00	.00	.50	.00	.00	.00	.00	.00	.00	.00	.00
9	.01	.00	.00	1.6	.00	.00	.00	.03	.00	.00	.00	.00
10	.01	.00	.00	.80	.00	.00	.00	.00	.00	.00	.00	.00
11	.01	.00	.00	.30	.00	.00	.00	.01	.02	.00	.00	.00
12	.01	.00	.00	.20	.00	.00	.00	.14	.06	.00	.00	.00
13	.01	.00	.00	.10	.00	.00	.00	.01	.00	.00	.00	.00
14	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.01	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00
16	.01	.01	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00
17	.01	.01	.00	.00	.00	.00	.00	.02	.00	.00	.01	.00
18	.01	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.01	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.01	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.01	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.01	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.01	.13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.07	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
26	.00	.04	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.01	.00	.00	.00	---	.00	.04	.00	.00	.00	.00	.00
30	.01	.00	.00	.00	---	.00	.02	.00	.00	.00	.00	.00
31	.01	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.30	0.39	0.00	3.50	0.00	0.00	0.10	0.51	0.50	0.00	0.03	0.00
MEAN	.010	.013	.000	.11	.000	.000	.003	.016	.017	.000	.001	.000
MAX	.06	.13	.00	1.6	.00	.00	.04	.20	.20	.00	.02	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.6	.8	.00	6.9	.00	.00	.2	1.0	1.0	.00	.06	.00

CAL YR 1989 TOTAL 7.01 MEAN .019 MAX .29 MIN .00 AC-FT 14
WTR YR 1990 TOTAL 5.33 MEAN .015 MAX 1.6 MIN .00 AC-FT 11

09251000 YAMPA RIVER NEAR MAYBELL, CO

LOCATION.--Lat 40°30'10", long 108°01'45", in NW¼ sec.2, T.6 N., R.95 W., Moffat County, Hydrologic Unit 14050002, on left bank 100 ft downstream from bridge on U.S. Highway 40, 2.0 mi downstream from Lay Creek, and 3.0 mi east of Maybell.

DRAINAGE AREA.--3,410 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1904 to October 1905, June 1910 to November 1912, April 1916 to current year. Monthly discharge only for some periods, published in WSP 1313. No winter records prior to 1917.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,900.23 ft above National Geodetic Vertical Datum of 1929. See WSP 1733 for history of changes prior to Mar. 9, 1937.

REMARKS.--Estimated daily discharges: Nov. 29 to Mar. 3, Mar. 19-28, and Aug. 7-17. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversions, numerous storage reservoirs, and diversions upstream from station for irrigation of about 65,000 acres upstream from, and about 800 acres downstream from station.

AVERAGE DISCHARGE.--74 years (water years 1917-90), 1,566 ft³/s; 1,135,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,100 ft³/s, May 17, 1984, gage height, 12.42 ft; minimum daily, 2.0 ft³/s, July 17-19, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 13	0900	*7,020	*7.10	No other peak greater than base discharge.			
Minimum daily, 23 ft ³ /s, Sept. 1.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	274	180	270	270	600	1090	1930	3990	1400	228	23
2	82	278	185	260	270	800	1180	1800	4270	1220	241	31
3	87	271	190	250	270	1000	1440	1770	3590	1090	214	36
4	86	250	190	250	280	1210	1610	1780	3190	1020	193	56
5	77	257	200	240	280	1370	1740	1840	3790	1250	151	57
6	71	279	200	240	280	1640	1620	1840	4820	1100	151	75
7	85	297	190	240	280	1480	1580	2150	5450	883	140	180
8	100	294	190	240	280	1390	1490	2830	5430	843	135	191
9	101	291	195	240	280	1600	1580	2890	5290	833	127	155
10	107	279	200	240	290	1790	1840	2410	5180	1110	120	145
11	109	275	210	250	300	1820	1650	2140	5110	1030	113	143
12	112	268	220	250	300	1610	1470	2370	5780	822	106	138
13	107	250	225	250	300	1410	1510	2300	6700	666	98	130
14	107	226	230	260	300	1300	1530	2210	5240	560	92	125
15	104	220	240	260	290	1050	1490	2140	4570	509	86	98
16	103	220	240	269	280	957	1730	2330	4170	485	80	66
17	116	183	240	250	270	872	2210	2220	3720	423	76	68
18	127	176	240	240	260	733	2370	1960	3170	396	68	74
19	142	201	250	240	250	690	2410	2030	3190	388	70	93
20	155	199	250	230	250	690	2580	2130	3270	352	72	96
21	166	201	260	230	250	700	2590	2320	2880	332	74	140
22	183	203	250	220	261	740	2700	2480	2800	338	70	148
23	192	195	250	220	280	780	2840	2980	2710	450	70	148
24	201	183	250	230	300	850	3020	3430	2620	395	68	135
25	199	201	240	240	340	880	2980	4090	2550	338	68	119
26	210	209	240	250	380	950	2850	4300	2370	356	68	120
27	206	240	240	260	450	980	2580	4090	2190	454	68	126
28	236	186	250	260	500	1020	2180	3610	2060	375	68	134
29	268	180	260	260	---	1100	2080	3840	1880	314	64	133
30	278	170	270	270	---	1180	2050	4080	1610	288	51	136
31	275	---	280	270	---	1190	---	3600	---	264	27	---
TOTAL	4468	6956	7055	7679	8341	34382	59990	81890	113590	20284	3257	3319
MEAN	144	232	228	248	298	1109	2000	2642	3786	654	105	111
MAX	278	297	280	270	500	1820	3020	4300	6700	1400	241	191
MIN	71	170	180	220	250	600	1090	1770	1610	264	27	23
AC-FT	8860	13800	13990	15230	16540	68200	119000	162400	225300	40230	6460	6580

CAL YR 1989 TOTAL 321015 MEAN 879 MAX 4720 MIN 25 AC-FT 636700
WTR YR 1990 TOTAL 351211 MEAN 962 MAX 6700 MIN 23 AC-FT 696600

09251000 YAMPA RIVER NEAR MAYBELL, CO--Continued
(National Stream-Quality Accounting Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1950 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1950 to August 1973, July 1975 to current year.

WATER TEMPERATURES: November 1950 to August 1973, July 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: December 1950 to May 1958, October 1975 to September 1976, October 1977 to September 1978, October 1981 to September 1982.

INSTRUMENTATION.--Water-quality monitor since July 1975.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office. Missing daily records are a result of instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1260 microsiemens Nov. 17, 1985; minimum, 87 microsiemens June 9-10, 1990.

WATER TEMPERATURES: Maximum, 33.0°C Aug. 29, 1976; minimum, freezing point on many days during winter months each year.

SEDIMENT CONCENTRATIONS: Maximum daily, 6,180 mg/l, Aug. 16, 1981; minimum daily, 1 mg/l, several days during December 1975 to February 1976, Jan. 6, 1980.

SEDIMENT LOADS: Maximum daily, 47,100 tons May 9, 1958; minimum daily, 0.04 ton Oct. 2,3, 1982

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, not determined; minimum, 87 microsiemens June 9, 10.

WATER TEMPERATURES: Maximum, not determined; minimum, freezing point on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 01...	0900	276	542	8.5	1.5	8.5	10.8	K5	K14	200	45
FEB 22...	0930	261	699	8.0	0.0	23	9.6	<1	24	240	51
MAY 22...	1215	2470	233	8.1	15.0	45	8.0	K33	K68	69	22
SEP 05...	1050	60	711	8.5	20.0	13	8.2	30	140	220	45

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CAC03	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
NOV 01...	22	42	1	2.5	162	8	146	110	14	0.2	5.3
FEB 22...	28	50	1	2.7	199	--	163	170	18	0.3	11
MAY 22...	8.2	11	0.6	1.2	82	--	67	31	3.8	0.2	9.8
SEP 05...	25	67	2	3.9	181	3	153	170	26	0.2	1.4

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)
NOV 01...	319	329	0.43	238	<0.01	<0.1	0.02	<0.01	0.48	0.50	0.02
FEB 22...	463	432	0.63	326	<0.01	0.6	0.10	0.10	1.2	1.3	0.06
MAY 22...	140	120	0.19	934	<0.01	<0.1	0.02	0.01	0.58	0.60	0.07
SEP 05...	434	431	0.59	70.3	<0.01	<0.1	0.02	<0.01	0.28	0.30	0.02

K BASED ON NON-IDEAL COLONY COUNT.

09251000 YAMPA RIVER NEAR MAYBELL, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 01...	<0.01	<0.01	20	<1	61	<0.5	<1	<1	<3	<1	35
FEB 22...	0.03	0.04	<10	<1	82	<0.5	<1	<5	<3	<10	11
MAY 22...	<0.01	<0.01	90	2	35	<0.5	<1	<1	<3	3	160
SEP 05...	<0.01	<0.01	<10	<1	75	<0.5	<1	<1	<3	3	<3

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 01...	<1	28	10	<0.1	<10	1	<1	<1	380	<6	8
FEB 22...	<10	32	17	0.2	<10	<10	1	<1	440	<6	15
MAY 22...	<1	7	7	<0.1	<10	1	<1	<1	160	<6	4
SEP 05...	<1	32	4	<0.1	<10	2	<1	<1	430	<6	<3

CROSS-SECTION PROFILES, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLE LOCAT. X-SECT. LOOKING UPSTRM. (FT FM R BANK)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	PERCENT OF DIS- CHARGE IN CROSS- SECTION	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)
NOV 01...	0910	10.0	--	15	543	8.5	1.5	10.8	17
01...	0911	40.0	--	29	543	8.5	1.5	10.8	26
01...	0912	80.0	--	38	541	8.5	1.5	10.8	15
01...	0913	130	--	18	542	8.5	1.5	10.8	15
FEB 22...	0931	--	110	6	730	7.9	0.0	9.5	33
22...	0932	--	90.0	21	706	7.9	0.0	9.6	16
22...	0933	--	70.0	18	690	7.6	0.0	9.6	4
22...	0934	--	50.0	23	688	7.9	0.0	9.6	5
22...	0935	--	20.0	32	677	8.1	0.0	9.6	5
MAY 22...	1216	90.0	--	5	236	8.1	15.0	8.2	168
22...	1217	130	--	20	233	8.1	15.0	8.0	164
22...	1218	170	--	25	232	8.1	15.0	8.0	150
22...	1219	210	--	30	231	8.1	14.5	8.0	139
22...	1220	250	--	20	231	8.1	15.0	8.0	122

09251000 YAMPA RIVER NEAR MAYBELL, CO--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
01...	0835	76	14	2.9	--
08...	1525	100	15	4.1	--
16...	1300	100	22	5.9	--
27...	1300	103	49	14	--
NOV					
01...	0900	276	15	11	92
01...	1730	274	22	16	--
05...	1150	257	43	30	--
12...	1115	268	24	17	--
19...	1300	201	18	9.8	--
DEC					
02...	1430	185	52	26	--
13...	1700	225	24	15	--
20...	1615	250	28	19	--
27...	1650	240	38	25	--
JAN					
03...	1450	250	14	9.5	--
10...	1355	240	21	14	--
20...	1245	230	33	20	--
28...	1415	260	19	13	--
FEB					
04...	1130	280	34	26	--
10...	1535	290	25	20	--
18...	1505	260	9	6.3	--
22...	0930	261	5	3.5	92
28...	1100	500	9	12	--
MAR					
03...	1000	1000	17	46	--
17...	1455	872	107	252	--
25...	1545	880	96	228	--
31...	1355	1190	195	627	--
APR					
08...	1530	1490	152	611	--
15...	1415	1490	111	447	--
29...	1020	2080	161	904	--
MAY					
07...	1845	2150	176	1020	--
13...	1650	2300	126	782	--
20...	1745	2130	87	500	--
22...	1215	2470	154	1030	81
27...	1020	4090	684	7550	--
JUN					
02...	1425	4270	718	8280	--
10...	1210	5180	505	7060	--
17...	1155	3720	253	2540	--
23...	1515	2710	92	673	--
JUL					
02...	1950	1220	34	112	--
08...	1550	843	22	50	--
15...	1150	509	15	21	--
25...	1805	338	9	8.2	--
29...	1405	314	9	7.6	--
AUG					
05...	1950	151	19	7.7	--
12...	1315	106	12	3.4	--
19...	1110	70	15	2.8	--
24...	1441	60	19	3.1	--
25...	1350	68	13	2.4	--
SEP					
03...	1415	36	16	1.6	--
05...	1050	60	27	4.4	95
09...	1220	155	18	7.5	--
11...	1134	149	10	4.0	--
17...	1920	68	13	2.4	--
23...	1620	148	13	5.2	--
30...	1025	136	15	5.5	--

09251000 YAMPA RIVER NEAR MAYBELL, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	608	615	695	279	145	160	---	---
2	---	---	---	---	608	610	663	295	133	171	---	---
3	---	---	---	---	614	607	---	289	139	181	---	---
4	---	---	---	---	622	620	---	276	154	191	---	---
5	---	---	---	---	610	671	---	262	149	196	---	---
6	---	---	---	---	606	667	---	251	128	184	---	---
7	---	---	---	---	607	709	---	242	116	196	---	---
8	---	---	---	---	607	736	---	211	107	221	---	---
9	---	---	---	---	615	724	422	185	105	238	---	---
10	---	---	---	---	604	672	403	185	103	239	---	---
11	---	---	---	---	613	685	401	199	104	223	---	---
12	---	---	---	---	620	720	436	211	105	230	---	---
13	---	---	---	---	614	775	452	216	124	240	---	---
14	---	---	---	---	627	791	404	227	150	253	---	---
15	---	---	---	---	645	761	380	227	142	269	---	---
16	---	---	---	---	611	726	374	226	129	---	---	---
17	---	---	---	682	607	737	405	216	129	---	---	---
18	---	---	---	691	600	---	444	222	137	---	---	---
19	---	---	---	699	609	---	469	228	135	---	---	---
20	---	---	---	674	665	---	305	215	129	---	---	---
21	---	---	---	656	657	---	248	204	132	---	---	---
22	---	---	---	673	654	---	236	193	133	---	---	---
23	---	---	---	661	653	---	225	183	132	---	---	---
24	---	---	---	646	632	---	215	165	132	---	---	---
25	---	---	---	639	612	---	208	150	131	---	---	---
26	---	---	---	634	617	---	221	134	132	---	---	---
27	---	---	---	631	606	---	227	130	135	---	---	---
28	---	---	---	623	614	---	236	140	137	---	---	---
29	---	---	---	611	---	835	259	136	143	---	---	---
30	---	---	---	614	---	769	265	129	148	---	---	---
31	---	---	---	615	---	725	---	141	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.7	12.1	---	---	---	---	---	---	.0	.0	.0	.0
2	16.1	10.8	---	---	---	---	---	---	.0	.0	.0	.0
3	14.6	9.5	---	---	---	---	---	---	.0	.0	.0	.0
4	14.7	10.1	---	---	---	---	---	---	.0	.0	.0	.0
5	---	---	---	---	---	---	---	---	.0	.0	.0	.0
6	---	---	---	---	---	---	---	---	.0	.0	.0	.0
7	---	---	---	---	---	---	---	---	.0	.0	.0	.0
8	---	---	---	---	---	---	---	---	.0	.0	.0	.0
9	---	---	---	---	---	---	---	---	.0	.0	.0	.0
10	---	---	---	---	---	---	---	---	.0	.0	.0	.0
11	---	---	---	---	---	---	---	---	.0	.0	.0	.0
12	---	---	---	---	---	---	---	---	.0	.0	.0	.0
13	---	---	---	---	---	---	---	---	.0	.0	.0	.0
14	---	---	---	---	---	---	---	---	.0	.0	.0	.0
15	---	---	---	---	---	---	---	---	.0	.0	.0	.0
16	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
17	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
18	---	---	---	---	---	---	.0	.0	.0	.0	---	---
19	---	---	---	---	---	---	.0	.0	.0	.0	---	---
20	---	---	---	---	---	---	.0	.0	.0	.0	---	---
21	---	---	---	---	---	---	.0	.0	.0	.0	---	---
22	---	---	---	---	---	---	.0	.0	.0	.0	---	---
23	---	---	---	---	---	---	.0	.0	.0	.0	---	---
24	---	---	---	---	---	---	.0	.0	.0	.0	---	---
25	---	---	---	---	---	---	.0	.0	.0	.0	---	---
26	---	---	---	---	---	---	.0	.0	.0	.0	---	---
27	---	---	---	---	---	---	.0	.0	.0	.0	---	---
28	---	---	---	---	---	---	.0	.0	.0	.0	---	---
29	---	---	---	---	---	---	.0	.0	---	---	6.5	5.5
30	---	---	---	---	---	---	.0	.0	---	---	6.4	4.5
31	---	---	---	---	---	---	.0	.0	---	---	8.4	4.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.1	5.6	10.9	6.5	---	---	---	---	---	---	---	---
2	11.6	7.6	12.7	9.0	---	---	---	---	---	---	---	---
3	11.6	9.1	12.8	10.1	---	---	---	---	---	---	---	---
4	10.9	9.9	13.5	10.3	---	---	---	---	---	---	---	---
5	10.4	9.4	14.5	10.8	---	---	---	---	---	---	---	---
6	9.7	8.0	15.2	11.5	---	---	---	---	---	---	---	---
7	9.6	8.1	14.2	12.7	---	---	---	---	---	---	---	---
8	11.0	8.9	12.5	9.7	---	---	---	---	---	---	---	---
9	9.0	7.6	11.0	8.1	---	---	---	---	---	---	---	---
10	9.6	6.5	11.8	8.3	---	---	---	---	---	---	---	---
11	10.6	7.6	---	---	---	---	---	---	---	---	---	---
12	11.6	9.5	---	---	---	---	---	---	---	---	---	---
13	12.1	9.0	---	---	---	---	---	---	---	---	---	---
14	11.9	9.5	---	---	---	---	---	---	---	---	---	---
15	13.0	9.5	---	---	---	---	---	---	---	---	---	---
16	13.9	11.0	---	---	---	---	---	---	---	---	---	---
17	12.1	10.6	---	---	---	---	---	---	---	---	---	---
18	12.3	9.6	---	---	---	---	---	---	---	---	---	---
19	12.8	10.3	---	---	---	---	---	---	---	---	---	---
20	13.1	10.5	---	---	---	---	---	---	---	---	---	---
21	12.9	10.9	---	---	---	---	---	---	---	---	---	---
22	13.2	10.6	---	---	---	---	---	---	---	---	---	---
23	12.2	10.4	---	---	---	---	---	---	---	---	---	---
24	11.6	10.0	---	---	---	---	---	---	---	---	---	---
25	10.6	9.0	---	---	---	---	---	---	---	---	---	---
26	9.6	7.8	---	---	---	---	---	---	---	---	---	---
27	7.7	6.1	---	---	---	---	---	---	---	---	---	---
28	8.1	6.9	---	---	---	---	---	---	---	---	---	---
29	8.5	5.5	---	---	---	---	---	---	---	---	---	---
30	8.7	6.0	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO

LOCATION.--Lat 40°59'58", long 107°08'34", in SW¼NW¼ sec.15, T.12 N., R.87 W., Routt County, Hydrologic Unit 14050003, on left bank just downstream from highway bridge at Focus Ranch, 0.2 mi downstream from Spring Creek, and 12 mi east of Slater.

DRAINAGE AREA.--285 mi².

PERIOD OF RECORD.--October 1942 to September 1947, October 1950 to current year.

REVISED RECORDS.--WSP 1733: 1960.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,831.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 9-26, Nov. 3-17, and Nov. 24 to Mar. 19. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 2,000 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--45 years, 232 ft³/s; 168,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,780 ft³/s, May 23, 1984, gage height, 8.78 ft, maximum gage height, 8.95 ft, Apr. 25, 1974; minimum daily discharge, 4.2 ft³/s, Sept. 9, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 13	2030	*1,060	*5.84				

Minimum daily, 7.0 ft³/s, Sept. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	29	23	17	24	32	59	284	812	114	36	19
2	19	21	23	17	24	32	73	309	769	106	36	25
3	18	20	23	17	24	33	102	358	700	108	33	34
4	23	21	22	17	24	33	127	403	742	133	29	24
5	27	21	22	18	24	34	142	373	749	105	27	20
6	23	20	22	18	24	35	137	552	792	100	26	29
7	27	20	23	18	24	35	145	759	771	144	25	23
8	27	20	23	19	24	36	178	692	725	171	24	17
9	26	21	23	20	24	36	186	515	677	185	23	15
10	25	21	23	20	24	36	177	480	650	162	23	14
11	26	20	22	21	24	36	193	581	748	99	22	13
12	26	20	21	22	24	36	213	503	939	82	21	12
13	26	21	20	22	24	37	208	469	891	72	23	12
14	26	22	20	22	25	38	219	501	729	72	21	12
15	25	24	20	22	26	40	298	594	592	67	21	17
16	25	24	20	22	26	44	378	499	535	69	42	18
17	25	25	20	22	27	44	404	509	487	63	38	13
18	25	28	19	23	28	46	445	607	429	59	50	12
19	25	29	18	24	28	49	479	574	391	59	32	9.7
20	25	28	18	25	29	50	516	590	351	70	26	14
21	26	28	18	25	29	51	581	580	315	101	26	9.6
22	26	26	17	25	30	48	619	652	279	70	22	8.0
23	27	26	17	24	30	47	666	758	256	64	22	7.0
24	27	25	17	25	30	47	653	889	232	57	21	7.9
25	28	25	17	25	30	43	584	867	211	65	18	11
26	29	25	17	25	30	43	468	800	190	55	16	13
27	31	24	17	25	30	48	355	741	170	47	15	13
28	36	24	17	25	31	51	362	747	151	43	14	13
29	27	24	17	24	---	50	360	820	135	41	14	17
30	34	24	17	24	---	50	307	766	124	40	13	18
31	25	---	17	24	---	53	---	849	---	38	14	---
TOTAL	802	706	613	677	741	1293	9634	18621	15542	2661	773	470.2
MEAN	25.9	23.5	19.8	21.8	26.5	41.7	321	601	518	85.8	24.9	15.7
MAX	36	29	23	25	31	53	666	889	939	185	50	34
MIN	17	20	17	17	24	32	59	284	124	38	13	7.0
AC-FT	1590	1400	1220	1340	1470	2560	19110	36930	30830	5280	1530	933

CAL YR 1989 TOTAL 51132 MEAN 140 MAX 923 MIN 13 AC-FT 101400
WTR YR 1990 TOTAL 52533.2 MEAN 144 MAX 939 MIN 7.0 AC-FT 104200

09255000 SLATER FORK NEAR SLATER, CO

LOCATION.--Lat 40°58'57", long 107°22'56", in SW¼NE¼ sec.21, T.12 N., R.89 W., Moffat County, Hydrologic Unit 14050003, on right bank 15 ft downstream from highway bridge, 1.0 mi upstream from mouth, and 1.5 mi south of Slater.

DRAINAGE AREA.--161 mi².

PERIOD OF RECORD.--May to October, December 1910, March to October 1911, and April to May 1912 (published as Slater Creek), July 1931 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 618: 1910-11. WSP 764: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,600 ft, from river-profile map. May 28, 1910, to May 25, 1912, nonrecording gage at site 1.5 mi upstream at different datum. July 9, 1931, to May 6, 1932, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 18, Dec. 19 to Jan. 17, and Jan. 29 to Mar. 6. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 500 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--59 years (water years 1932-90), 77.3 ft³/s; 56,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,250 ft³/s, May 16, 1984, gage height, 11.78 ft (from floodmark), from rating curve extended above 1,000 ft³/s; no flow Aug. 2-10, 1934, Aug. 18, 25-27, 1936, Aug. 29 to Sept. 3, 1954, Aug. 3, 4, 15, 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 430 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	1730	*430	*5.82	No other peak greater than base discharge.			
Minimum daily, 1.7 ft ³ /s, Aug. 13.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	14	19	13	12	13	41	100	197	17	4.1	5.6
2	5.8	15	17	13	12	13	51	110	158	13	3.7	8.0
3	5.5	22	17	13	12	13	63	123	136	8.8	3.8	11
4	7.2	16	16	13	12	13	74	132	150	10	4.8	11
5	8.5	15	17	13	12	13	75	131	179	6.5	5.3	8.0
6	7.6	16	18	12	12	13	69	174	183	7.3	3.5	14
7	7.8	15	17	12	12	13	71	237	167	8.4	4.0	13
8	7.6	14	23	12	12	13	86	221	149	11	5.0	10
9	7.6	16	16	12	12	16	101	148	122	24	4.5	8.9
10	7.7	16	17	12	12	22	73	124	128	28	2.5	7.9
11	7.2	16	20	12	12	28	82	160	149	20	2.0	7.1
12	6.9	16	16	12	12	28	93	134	321	16	2.3	5.3
13	7.0	17	15	12	12	23	91	130	304	13	1.7	4.9
14	6.8	17	16	12	12	17	91	144	206	12	2.2	4.9
15	7.6	14	16	12	12	29	127	185	147	11	2.6	4.9
16	8.4	20	16	12	12	23	162	135	124	9.8	5.7	5.5
17	8.7	21	17	12	12	22	172	115	110	7.9	13	6.5
18	9.0	17	16	12	12	24	187	150	97	7.9	11	9.2
19	9.6	23	15	11	12	27	197	142	91	7.3	10	9.3
20	11	20	14	14	12	31	208	151	82	7.5	7.3	14
21	12	16	14	14	13	34	211	140	75	8.3	5.6	12
22	12	15	14	12	13	40	244	167	69	9.5	4.7	10
23	13	18	13	12	13	41	275	178	60	8.8	4.0	9.4
24	13	16	13	12	13	40	258	214	45	8.6	4.0	8.4
25	12	16	13	12	13	35	241	195	41	8.1	3.3	8.0
26	14	17	13	15	13	31	196	163	36	9.6	2.8	7.9
27	15	15	13	14	13	38	130	142	33	7.4	2.3	8.6
28	17	19	13	14	13	38	116	142	27	5.4	1.9	8.8
29	15	21	13	13	---	39	124	163	24	3.8	3.1	10
30	14	23	13	13	---	35	106	166	21	4.2	4.1	9.3
31	14	---	13	13	---	36	---	227	---	4.3	4.4	---
TOTAL	304.0	516	483	390	344	801	4015	4843	3631	324.4	139.2	261.4
MEAN	9.81	17.2	15.6	12.6	12.3	25.8	134	156	121	10.5	4.49	8.71
MAX	17	23	23	15	13	41	275	237	321	28	13	14
MIN	5.5	14	13	11	12	13	41	100	21	3.8	1.7	4.9
AC-FT	603	1020	958	774	682	1590	7960	9610	7200	643	276	518

CAL YR 1989 TOTAL 15138.7 MEAN 41.5 MAX 347 MIN 1.6 AC-FT 30030
WTR YR 1990 TOTAL 16052.0 MEAN 44.0 MAX 321 MIN 1.7 AC-FT 31840

09257000 LITTLE SNAKE RIVER NEAR DIXON, WY

LOCATION.--Lat 41°01'42", long 107°32'55", in SE¼NW¼ sec.8, T.12 N., R.90 W., Carbon County, Hydrologic Unit 14050003, on left bank 200 ft upstream from highway bridge, 1,000 ft upstream from Willow Creek, and 0.8 mi west of Dixon.

DRAINAGE AREA.--988 mi².

PERIOD OF RECORD.--May 1910 to September 1923, March 1938 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1920(M). WDR CO-85-3: 1984 (M).

GAGE.--Water-stage recorder. Datum of gage is 6,331.22 ft above National Geodetic Vertical Datum of 1929. May 27, 1910, to Sept. 30, 1923, nonrecording gage on highway bridge 200 ft downstream at datum 2.98 ft, higher. Mar. 15, 1938, to Sept. 30, 1957, water-stage recorder at site 225 ft downstream at datum 2.98 ft, higher; Oct. 1, 1957, to June 6, 1968, at site 850 ft downstream at present datum, and June 7 to Sept. 30, 1968, at site 225 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Apr. 1-9. Records fair. Diversions for irrigation of about 9,500 acres upstream from station. One diversion upstream from station for irrigation of about 3,000 acres downstream. Transbasin diversions upstream from station. Results of discharge measurements, in ft³/s, made during the period when station was not in operation are given below:

Nov. 6 . . . 69.1
Dec. 12 . . . 59.9

AVERAGE DISCHARGE.--46 years (water years 1911-23, 1939-71), 514 ft³/s, 372,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s, May 16, 1984, gage height, 13.56 ft, from floodmark, from rating curve extended above 10,000 ft³/s, some increase in peak due to dam failure; no flow Sept. 19, 20, 22, 1977, Aug. 7, 17, 18, 27-29, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,200 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	1830	*2,370	a*7.16				

Minimum daily discharge during current period, 0.75 ft³/s, Oct. 14.

a Maximum during period of operation, but may have been exceeded during ice break-up period.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.81	---	---	---	---	---	400	705	1410	76	3.9	1.5
2	.86	---	---	---	---	---	450	647	1350	68	3.2	1.7
3	1.2	---	---	---	---	---	500	625	1150	48	3.1	2.2
4	1.2	---	---	---	---	---	520	704	1150	24	2.8	3.4
5	1.2	---	---	---	---	---	550	725	1240	18	2.6	3.1
6	1.2	---	---	---	---	---	500	865	1340	12	2.5	2.4
7	1.2	---	---	---	---	---	500	1230	1330	9.2	2.4	2.9
8	.99	---	---	---	---	---	520	1290	1250	9.6	2.3	2.9
9	.93	---	---	---	---	---	612	945	1170	16	2.2	2.4
10	.85	---	---	---	---	---	511	760	1080	50	2.0	2.3
11	.80	---	---	---	---	---	543	900	1200	39	1.9	2.1
12	.81	---	---	---	---	---	616	831	1960	23	1.8	1.9
13	.77	---	---	---	---	---	621	770	1970	17	1.8	1.8
14	.75	---	---	---	---	---	603	742	1710	13	2.0	1.5
15	.78	---	---	---	---	---	748	912	1230	11	2.1	1.3
16	.78	---	---	---	---	---	1050	796	1050	7.7	2.1	1.2
17	.78	---	---	---	---	---	1080	686	964	6.9	5.2	1.3
18	1.1	---	---	---	---	---	1140	836	840	5.7	4.5	1.4
19	1.1	---	---	---	---	---	1200	822	716	5.5	5.8	2.4
20	1.1	---	---	---	---	---	1200	855	624	5.7	3.7	2.6
21	1.1	---	---	---	---	---	1260	837	530	9.8	3.3	3.2
22	1.4	---	---	---	---	---	1420	916	463	17	3.0	3.0
23	1.4	---	---	---	---	---	1500	1020	403	9.3	2.9	2.4
24	1.4	---	---	---	---	---	1530	1330	342	8.8	2.3	2.0
25	1.3	---	---	---	---	---	1390	1410	302	8.1	2.1	1.9
26	1.3	---	---	---	---	---	1220	1290	248	8.5	1.8	1.9
27	1.5	---	---	---	---	---	888	1140	175	6.1	1.6	1.8
28	1.7	---	---	---	---	---	768	1130	135	4.5	1.4	1.9
29	2.0	---	---	---	---	---	776	1200	116	4.1	1.4	1.9
30	2.3	---	---	---	---	---	743	1230	99	4.1	1.4	1.9
31	2.0	---	---	---	---	---	---	1450	---	4.2	1.5	---
TOTAL	36.61	---	---	---	---	---	25359	29599	27547	549.8	80.6	64.2
MEAN	1.18	---	---	---	---	---	845	955	918	17.7	2.60	2.14
MAX	2.3	---	---	---	---	---	1530	1450	1970	76	5.8	3.4
MIN	.75	---	---	---	---	---	400	625	99	4.1	1.4	1.2
AC-FT	73	---	---	---	---	---	50300	58710	54640	1090	160	127

09258000 WILLOW CREEK NEAR DIXON, WY

LOCATION.--Lat 40°54'56", long 107°31'16", on line between secs. 8 and 17, T.11 N., R.90 W., Moffat County, Colorado, Hydrologic Unit 14050003, on right bank 6.2 mi south of Colorado-Wyoming State line, 8.0 mi upstream from mouth, and 8.3 mi south of Dixon.

DRAINAGE AREA.--24 mi², approximately.

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 29 to Mar. 24. Records good except for estimated daily discharges, which are poor. One small ditch diverts water upstream from station for irrigation. Regulation by Elk Lake, capacity, 400 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--37 years, 10.4 ft³/s; 7,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 476 ft³/s, May 10, 1984, gage height, 6.02 ft, from rating curve extended above 160 ft³/s; maximum gage height, 7.08 ft, Apr. 18, 1984 (backwater from ice); no flow, Sept. 17-19, 1955, many days July through Sept. 1977, Aug. 8-16, 1982, and Aug. 27-31, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	1250	*109	*3.97	No other peak greater than base discharge.			
No flow, Aug. 27-31.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.2	1.9	1.8	2.0	2.2	11	3.6	26	2.8	.20	.05
2	1.5	3.4	1.9	1.8	2.0	2.2	17	2.7	16	3.3	.32	1.7
3	1.4	3.2	1.9	1.8	2.0	2.2	21	2.4	14	5.5	.51	2.1
4	1.6	2.3	1.8	1.8	2.0	2.2	21	2.6	26	5.7	.34	1.6
5	1.8	2.2	1.8	1.8	2.0	2.2	17	4.0	40	4.2	.24	1.5
6	1.8	2.3	1.9	1.8	2.0	2.3	12	5.5	40	3.7	.23	3.2
7	1.8	2.1	1.9	1.7	2.0	2.4	10	9.2	38	3.5	.20	1.5
8	1.8	2.3	1.9	1.7	2.0	2.5	27	8.3	34	5.4	.19	1.2
9	1.8	2.1	1.9	1.7	2.0	2.7	19	5.0	35	5.1	.12	1.2
10	1.8	2.0	1.9	1.7	2.0	3.2	11	3.6	43	3.7	.06	1.2
11	1.7	1.9	1.8	1.8	2.0	3.4	12	5.0	47	3.0	.02	1.1
12	1.4	1.9	1.8	1.8	2.0	3.3	13	4.3	66	2.5	.07	.99
13	1.3	1.9	1.7	1.8	2.1	3.2	9.1	3.6	47	2.2	.16	.94
14	1.3	1.7	1.7	1.8	2.1	2.6	7.8	3.3	38	2.0	.18	.89
15	1.3	1.6	1.7	1.8	2.2	3.5	12	5.9	31	1.6	.32	.91
16	1.4	2.5	1.7	1.8	2.2	3.1	14	5.6	27	1.4	.70	1.1
17	1.6	2.4	1.7	1.8	2.3	3.1	13	7.1	21	1.3	2.0	2.5
18	1.5	2.4	1.7	1.8	2.3	3.5	12	10	22	1.2	1.8	2.1
19	1.3	2.3	1.7	1.8	2.3	4.0	10	6.1	24	.95	1.3	3.0
20	1.6	2.2	1.7	1.8	2.3	4.4	9.7	7.1	20	1.8	.84	2.6
21	1.7	2.1	1.7	1.9	2.3	4.7	8.4	7.6	19	3.0	.64	1.8
22	2.1	2.2	1.7	1.9	2.3	4.5	10	13	17	.60	.67	1.4
23	2.4	2.5	1.7	1.9	2.3	5.0	11	14	15	.48	1.0	1.2
24	2.2	2.3	1.6	1.9	2.3	4.0	9.9	19	14	.43	.65	1.3
25	2.1	2.1	1.6	1.9	2.2	3.8	15	18	12	.48	.15	1.2
26	2.6	2.0	1.6	1.9	2.2	7.0	7.9	16	9.6	.39	.02	1.1
27	2.2	1.9	1.7	1.9	2.2	8.9	4.6	13	7.7	.30	.00	1.3
28	2.8	2.3	1.8	2.0	2.2	7.3	4.2	15	5.9	.27	.00	1.6
29	2.5	2.0	1.8	2.0	---	5.8	5.8	20	4.5	.23	.00	1.3
30	2.3	1.9	1.9	2.0	---	5.4	5.1	21	3.5	.23	.00	1.2
31	2.2	---	1.8	2.0	---	7.3	---	33	---	.23	.00	---
TOTAL	56.1	66.2	54.9	56.9	59.8	121.9	360.5	294.5	763.2	67.49	12.93	44.78
MEAN	1.81	2.21	1.77	1.84	2.14	3.93	12.0	9.50	25.4	2.18	.42	1.49
MAX	2.8	3.4	1.9	2.0	2.3	8.9	27	33	66	5.7	2.0	3.2
MIN	1.3	1.6	1.6	1.7	2.0	2.2	4.2	2.4	3.5	.23	.00	.05
AC-FT	111	131	109	113	119	242	715	584	1510	134	26	89

CAL YR 1989 TOTAL 1662.7 MEAN 4.56 MAX 28 MIN 1.1 AC-FT 3300
WTR YR 1990 TOTAL 1959.20 MEAN 5.37 MAX 66 MIN .00 AC-FT 3890

09259050 LITTLE SNAKE RIVER BELOW BAGGS, WY

LOCATION.--Lat 41°01'43", long 107°41'14", in SE¼NW¼NW¼ sec.7, T.12 N., R.92 W., Carbon County, Hydrologic Unit 14050003, 0.8 mi downstream from Ledford Slough, 1.5 mi southwest of Baggs, and 3.5 mi downstream from bridge on State Highway 789 in Baggs.

PERIOD OF RECORD.--Water years 1981 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 02...	1000	0.24	9.0	626	220	52	23	56	2	4.4	220	91
APR 09...	1230	868	7.0	305	110	32	8.5	14	0.6	1.8	100	52
22...	1100	E1500	8.5	162	63	18	4.4	8.8	0.5	1.1	60	29
JUN 13...	0800	E2200	7.0	201	71	19	5.7	14	0.7	1.6	67	28

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 02...	13	0.5	9.6	381	0.52	0.25	<0.1	0.03	<5	23	0.02
APR 09...	3.3	0.5	14	187	0.25	438	0.2	0.06	<5	748	1750
22...	1.6	0.4	12	112	0.15	--	0.1	0.06	<5	421	--
JUN 13...	3.9	0.1	13	126	0.17	--	0.2	0.06	<5	810	--

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	DICAMBA (MED- IBEN) (BAN- DON) TOTAL (UG/L)	PICLO- RAM (TOR- DON) TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 13...	0800	E2200	7.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

E-Estimate.

09259990 SAND WASH NEAR SUNBEAM, CO

LOCATION.--Lat 40°37'12", long 108°22'06", in NW¼NE¼ sec.26, T.8 N., R.98 W., Moffat County, Hydrologic Unit 14050003, on right upstream pier of triple box culvert on state highway 318, 2.3 mi upstream from confluence with Little Snake River, and 10.5 mi northeast of Sunbeam.

DRAINAGE AREA.--239 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,790 ft, above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Mar. 6, 7 and Mar. 14 to Apr. 4. Records excellent except for periods of flow, which are poor. No regulation or diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 297 ft³/s, Mar. 20, 1989, gage height, 3.27 ft; no flow most days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 280 ft³/s at 1510 June 12, gage height, 3.50 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.67	.00	.00	.25	.00	.00	.00
3	.00	.00	.00	.00	.00	8.1	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	48	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	98	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	41	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	29	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	85	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	108	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	73	.00	.00	33	.00	.00	.00
12	.00	.00	.00	.00	.00	3.2	.00	.00	127	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	5.1	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	495.71	0.00	0.00	165.36	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	16.0	.000	.000	5.51	.000	.000	.000
MAX	.00	.00	.00	.00	.00	108	.00	.00	127	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	983	.00	.00	328	.00	.00	.00

CAL YR 1989 TOTAL 937.61 MEAN 2.57 MAX 112 MIN .00 AC-FT 1860
WTR YR 1990 TOTAL 661.07 MEAN 1.81 MAX 127 MIN .00 AC-FT 1310

09259990 SAND WASH NEAR SUNBEAM, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--OCTOBER 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
MAR 12...	2030	3.4	528	8.4	2.0	10.4	47	15	2.2	94	6
JUN 12...	1245	268	459	9.3	11.5	--	9	3.0	0.5	100	14

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
MAR 12...	0.6	98	140	4.4	0.2	7.6	323	0.44	2.96	--
JUN 12...	0.9	--	110	8.1	0.5	15	--	--	--	0.20

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
MAR 09...	1300	30	310	7.0	JUN 13...	1150	5.6	440	11.5
10...	1215	184	304	4.5					

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- SOLVED (MG/L)	SED- MENT, DIS- SOLVED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 12...	2030	3.4	4150	38	99
12...	2031	3.4	3770	35	--
JUN 12...	1245	268	47200	34200	--

09260000 LITTLE SNAKE RIVER NEAR LILY, CO

LOCATION.--Lat 40°32'50", long 108°25'25", in NW¼NE¼ sec.20, T.7 N., R.98 W., Moffat County, Hydrologic Unit 14050003, on left bank 170 ft downstream from highway bridge, 6.0 mi north of Lily, and 10 mi upstream from mouth.

DRAINAGE AREA.--3,730 mi², approximately.

PERIOD OF RECORD.--June to August 1904 (published as "near Maybell"), October 1921 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1713: 1959.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,685 ft, from river-profile map. June 9 to Aug. 14, 1904, nonrecording gage, and May 5, 1922, to Nov. 30, 1935, water-stage recorder, at site 300 ft upstream at different datums.

REMARKS.--Estimated daily discharges: Dec. 19 to Mar. 13. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 21,000 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--69 years, 581 ft³/s; 420,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s, May 18, 1984, gage height, 9.85 ft; maximum gage height, 11.1 ft, Feb. 13, 1962, from floodmark (backwater from ice); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 13	1430	*2,920	*4.78				

No flow, Sept. 9, 11-17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	33	84	72	68	30	316	714	1230	155	22	1.0
2	9.0	30	85	70	66	35	327	667	1380	134	22	3.1
3	3.7	56	90	70	64	45	352	623	1370	111	22	3.4
4	4.4	74	107	70	64	55	355	536	1220	109	21	1.6
5	4.4	61	124	68	64	70	450	527	1050	114	21	.69
6	4.7	53	128	68	64	78	527	600	1090	98	21	.31
7	2.3	61	125	68	64	76	632	624	1170	88	20	.03
8	3.4	69	120	68	64	72	647	692	1220	72	20	.01
9	4.9	79	114	70	64	80	537	966	1210	81	20	.00
10	5.9	80	110	70	62	90	533	940	1160	73	19	.01
11	5.7	67	96	70	60	100	680	694	1170	109	19	.00
12	5.5	69	145	70	58	110	551	585	1470	89	18	.00
13	6.2	79	131	70	58	140	552	700	2480	84	18	.00
14	7.2	80	121	70	58	151	613	643	2400	109	19	.00
15	8.1	61	126	70	58	260	611	585	1870	80	18	.00
16	9.5	61	135	70	60	311	584	567	1410	75	18	.00
17	9.4	94	127	70	60	490	724	713	1190	61	12	.00
18	10	109	115	70	60	473	964	621	1060	60	7.4	5.3
19	11	77	110	70	58	433	982	535	940	59	7.2	1.1
20	13	85	105	74	54	330	1030	639	799	55	7.1	.38
21	13	105	105	78	50	340	1050	633	691	45	7.5	.54
22	23	93	100	80	45	329	1060	673	609	50	7.1	.08
23	21	100	98	82	36	372	1120	655	504	52	6.5	1.5
24	21	89	98	80	32	370	1220	711	441	59	2.9	7.7
25	20	109	94	80	28	414	1280	850	404	38	1.4	7.2
26	22	101	90	80	28	461	1230	1140	353	41	.66	8.7
27	29	88	86	80	28	430	1130	1160	315	45	.27	9.6
28	78	42	84	80	27	308	990	1070	266	47	.25	7.3
29	49	49	80	78	---	300	767	1000	213	31	.20	5.7
30	38	77	76	75	---	331	692	1040	178	20	.10	5.5
31	43	---	74	70	---	335	---	1160	---	23	.71	---
TOTAL	495.1	2231	3283	2261	1502	7419	22506	23263	30863	2267	379.29	70.75
MEAN	16.0	74.4	106	72.9	53.6	239	750	750	1029	73.1	12.2	2.36
MAX	78	109	145	82	68	490	1280	1160	2480	155	22	9.6
MIN	2.3	30	74	68	27	30	316	527	178	20	.10	.00
AC-FT	982	4430	6510	4480	2980	14720	44640	46140	61220	4500	752	140

CAL YR 1989 TOTAL 97643.69 MEAN 268 MAX 2030 MIN .00 AC-FT 193700
WTR YR 1990 TOTAL 96540.14 MEAN 264 MAX 2480 MIN .00 AC-FT 191500

09260050 YAMPA RIVER AT DEERLODGE PARK, CO

LOCATION.--Lat 40°27'02", long 108°31'20", in SE¼SW¼ sec.21, T.6 N., R.99 W., Moffat County, Hydrologic Unit 1405002, in Dinosaur National Monument, on left bank at Deerlodge Park, 1,250 ft upstream from Disappointment Draw, and 5.5 mi downstream from Little Snake River.

DRAINAGE AREA.--7,660 mi², approximately.

PERIOD OF RECORD.--August 1975 and January 1978 (discharge measurements only), April 1982 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

AVERAGE DISCHARGE.--8 years, 2,468 ft³/s; 1,788,000 acre-ft/yr. The figure published in the 1989 report was in error; the correct figure is 7 years, 2,653 ft³/s; 1,922,000 acre-ft/yr.

REMARKS.--Estimated daily discharges: Nov. 30 to Mar. 9 and Aug. 27 to Sept. 6. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversions, numerous storage reservoirs, and diversions for irrigation of about 86,800 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,200 ft³/s, May 18, 1984, gage height, 19.13 ft; minimum daily, 29 ft³/s, Sept. 11, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 13	1945	*9,960	*8.57				
Minimum daily, 50 ft ³ /s, Sept. 2.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	201	190	270	260	500	1470	2250	4690	1160	283	52
2	135	168	200	260	260	600	1550	2370	5510	1090	258	50
3	139	203	200	250	260	800	1530	2350	5300	1110	249	54
4	137	241	200	250	270	1200	1890	2190	4700	1100	233	64
5	132	243	210	250	280	1500	2400	2240	4550	1060	218	76
6	135	183	210	250	290	1700	2570	2330	5420	1060	178	72
7	135	162	210	250	300	1600	2370	2510	6430	1120	160	83
8	133	310	210	250	330	1500	2000	2750	6850	994	151	151
9	135	323	210	250	340	1480	1980	2840	6710	946	136	210
10	135	264	220	250	350	1520	2220	2650	6650	951	130	187
11	139	229	220	250	370	1760	2930	2650	6400	1130	121	159
12	136	229	220	260	380	1530	2610	2760	6960	997	114	157
13	135	193	230	260	380	1460	2420	2990	8660	881	92	151
14	135	164	240	270	370	1190	2460	2730	8870	764	91	154
15	131	151	240	260	370	1040	2570	2680	7250	643	91	151
16	126	171	250	250	370	1020	2650	2370	6360	574	92	143
17	124	144	250	240	360	1040	2920	2500	5570	553	98	121
18	121	185	250	230	350	1120	3420	2340	4930	489	97	101
19	122	127	250	230	340	1010	3490	2250	4560	464	91	94
20	125	145	250	220	330	962	3630	2870	4430	450	91	105
21	127	138	250	210	340	1150	3440	3100	4090	425	90	113
22	127	166	250	200	350	1290	3310	3200	3780	395	107	129
23	123	257	250	210	340	1380	3330	3130	3610	408	101	150
24	124	252	250	210	340	1230	3310	3760	3410	510	90	160
25	124	141	250	220	350	1320	3290	4510	3280	454	91	164
26	121	152	250	230	360	1410	3150	5000	3050	386	89	151
27	118	135	260	230	383	1300	3040	5230	2780	392	82	147
28	116	110	270	240	400	1300	2870	4590	2570	488	75	145
29	125	111	280	250	---	1480	2450	4260	2160	407	70	150
30	193	180	280	260	---	1530	2440	4660	1540	330	62	151
31	182	---	280	260	---	1550	---	4660	---	306	54	---
TOTAL	4127	5678	7330	7520	9423	39472	79710	96720	151070	22037	3885	3795
MEAN	133	189	236	243	337	1273	2657	3120	5036	711	125	126
MAX	193	323	280	270	400	1760	3630	5230	8870	1160	283	210
MIN	116	110	190	200	260	500	1470	2190	1540	306	54	50
AC-FT	8190	11260	14540	14920	18690	78290	158100	191800	299600	43710	7710	7530

CAL YR 1989 TOTAL 381005 MEAN 1044 MAX 5840 MIN 29 AC-FT 755700
WTR YR 1990 TOTAL 430767 MEAN 1180 MAX 8870 MIN 50 AC-FT 854400

GREEN RIVER BASIN

09303000 NORTH FORK WHITE RIVER AT BUFORD, CO

LOCATION.--Lat 39°59'15", long 107°36'50", in NW¼NW¼ sec.9, T.1 S., R.91 W., Rio Blanco County, Hydrologic Unit 14050005, on right bank 600 ft east of Buford and 1.2 mi upstream from South Fork White River.

DRAINAGE AREA.--259 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1910 to December 1915, July 1919 to December 1920, October 1951 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as North Fork White River near Buford prior to 1951 and as White River at Buford 1951-67. Records for July 1903 to December 1906 at site 6.5 mi upstream not equivalent because of inflow between sites.

REVISED RECORDS.--WSP 1343: 1912. WDR CO-89-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,010 ft above National Geodetic Vertical Datum of 1929, from topographic map. May 24, 1910, to May 27, 1914, nonrecording gage at site 1.5 mi upstream at different datum. May 28, 1914, to Dec. 7, 1915, and July 1, 1919, to Oct. 9, 1920, nonrecording gage at present site at different datum.

REMARKS.--Estimated daily discharges: Nov. 26 to Mar. 5. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 900 acres upstream from, and 300 acres downstream from station.

AVERAGE DISCHARGE.--45 years (water years 1911-15, 1920, 1952-90), 318 ft³/s; 230,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,550 ft³/s, May 24, 1984, gage height, 6.76 ft; maximum gage height, 7.22 ft, Jan. 9, 1961 (backwater from ice); minimum daily discharge, 90 ft³/s, Feb. 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	0400	*1,060	*5.16	No other peak greater than base discharge.			
Minimum daily, 106 ft ³ /s, Dec. 26.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	162	127	145	162	140	171	251	492	254	188	159
2	163	161	125	125	158	140	177	254	441	252	191	157
3	162	173	143	148	139	138	186	270	433	242	187	153
4	174	161	140	123	156	140	200	280	501	247	178	161
5	168	162	170	152	164	140	201	282	555	239	168	157
6	164	163	195	146	152	169	212	333	612	237	171	151
7	166	162	143	156	175	163	212	401	667	235	164	150
8	167	162	127	193	157	161	217	380	676	255	156	150
9	166	162	140	170	150	161	219	322	682	264	159	149
10	164	160	138	161	156	161	198	320	695	240	163	147
11	163	160	118	157	145	165	202	367	759	230	164	144
12	163	159	109	152	180	164	209	327	925	219	171	143
13	161	159	130	153	130	160	208	306	757	213	171	141
14	160	159	143	157	130	160	212	298	682	208	169	140
15	163	160	127	152	125	164	264	345	628	205	170	139
16	174	165	127	153	140	159	315	323	570	206	174	139
17	166	160	125	163	145	158	324	292	519	206	175	155
18	164	162	135	131	139	157	321	304	469	207	170	147
19	162	162	127	141	160	157	324	312	437	210	165	147
20	166	155	154	153	145	162	341	357	415	208	166	146
21	174	156	148	132	140	166	353	396	393	208	164	146
22	171	157	146	139	135	170	375	452	375	204	164	145
23	169	162	138	140	135	177	381	494	355	201	165	144
24	166	155	138	143	130	171	358	551	334	198	161	145
25	164	162	127	141	135	171	334	542	325	212	162	146
26	173	160	106	183	135	172	307	518	314	204	152	149
27	168	160	133	158	135	174	273	485	301	199	150	147
28	170	159	135	143	135	176	272	503	284	195	151	146
29	166	113	138	141	---	174	270	524	271	191	151	142
30	175	113	138	124	---	168	249	469	258	189	149	144
31	165	---	146	124	---	166	---	484	---	187	154	---
TOTAL	5160	4726	4236	4599	4088	5004	7885	11742	15125	6765	5143	4429
MEAN	166	158	137	148	146	161	263	379	504	218	166	148
MAX	175	173	195	193	180	177	381	551	925	264	191	161
MIN	160	113	106	123	125	138	171	251	258	187	149	139
AC-FT	10230	9370	8400	9120	8110	9930	15640	23290	30000	13420	10200	8780

CAL YR 1989 TOTAL 90328 MEAN 247 MAX 696 MIN 106 AC-FT 179200
WTR YR 1990 TOTAL 78902 MEAN 216 MAX 925 MIN 106 AC-FT 156500

09303000 NORTH FORK WHITE RIVER AT BUFORD, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAR 21...	1450	146	341	8.6	7.0	9.8	170	52	9.6
JUN 14...	1215	675	187	8.4	10.0	8.7	87	26	5.3

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAR 21...	3.5	0.1	1.0	91	84	0.3	0.2	19	224
JUN 14...	2.0	0.1	0.7	62	30	0.4	0.1	14	116

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
MAR 21...	0.30	88.4	<0.01	<0.1	<0.01	<0.2	0.02	0.01
JUN 14...	0.16	211	<0.01	<0.1	<0.01	<0.2	0.02	<0.01

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 05...	1531	167	348	10.5	MAY 21...	0954	377	229	6.0
NOV 06...	1546	164	315	3.0	28...	1701	467	213	10.5
DEC 06...	1219	200	350	0.5	JUN 15...	1132	643	211	13.0
JAN 16...	1215	167	--	0.5	JUL 09...	1231	259	317	14.0
FEB 07...	1248	181	338	0.5	AUG 06...	1128	170	387	11.5
MAR 01...	1357	146	330	3.0	SEP 10...	1141	149	366	12.5
APR 05...	1148	196	319	5.5					

GREEN RIVER BASIN

09303000 NORTH FORK WHITE RIVER AT BUFORD, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 21...	1450	146	5	2.0	63
JUN 14...	1215	675	85	155	16

LOCATION.--Lat 39°50'36", long 107°20'03", in NW¼ sec.36, T.2 S., R.89 W., Garfield County, Hydrologic Unit 14050005, on right bank 20 ft upstream from Forest Service trail bridge, 0.2 mi upstream from Wagonwheel Creek, and 0.3 mi northeast of Budge's Resort.

GAGE.--Water-stage recorder. Elevation of gage is 8,980 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1, 1975, to July 7, 1976, at site on left bank 50 ft upstream at datum 1.3 ft, lower.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,750 ft³/s, June 25, 1983, gage height, 6.57 ft, from rating curve extended above 850 ft³/s; minimum daily, 21 ft³/s, Sept. 29, 30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 893 ft³/s at 2230 June 7, gage height, 5.47 ft; minimum daily, 35 ft³/s, Feb. 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	51	48	43	41	37	47	65	254	81	54	52
2	45	56	44	50	44	40	49	66	211	80	55	51
3	46	55	42	43	35	52	51	71	216	84	55	50
4	52	50	48	44	40	58	53	72	305	92	53	50
5	49	50	41	41	45	52	52	77	438	88	53	51
6	47	50	50	41	40	50	54	91	586	95	53	50
7	47	50	46	38	47	48	56	109	646	84	52	48
8	47	54	45	42	44	49	57	109	631	91	52	49
9	47	51	44	54	40	50	54	104	561	84	53	47
10	47	51	46	50	44	51	51	103	553	78	53	47
11	47	50	45	48	43	48	51	109	522	74	54	46
12	46	51	46	45	44	47	53	104	451	70	56	46
13	46	51	43	47	45	48	52	100	358	68	56	45
14	46	50	45	46	45	45	55	97	328	67	54	45
15	48	52	46	44	41	43	65	101	261	66	56	45
16	50	56	45	51	41	46	75	97	213	65	58	45
17	48	56	42	54	38	47	77	94	182	64	62	50
18	47	54	44	51	43	46	77	97	170	66	59	48
19	49	52	42	50	44	45	80	98	154	68	55	50
20	48	51	44	47	44	46	87	106	138	63	55	48
21	49	51	45	44	48	47	91	116	130	66	56	47
22	50	52	48	41	51	47	96	142	123	61	57	45
23	50	52	46	40	50	49	95	177	117	62	57	45
24	49	49	43	41	49	48	88	232	112	64	55	45
25	48	49	43	41	52	48	85	256	99	74	54	46
26	49	50	41	40	37	49	80	255	101	63	53	44
27	50	50	47	39	44	47	73	249	97	58	51	45
28	48	52	51	44	40	47	70	260	91	56	51	45
29	46	51	53	42	---	47	68	262	85	55	50	47
30	52	52	52	41	---	47	68	219	82	54	51	47
31	55	---	50	41	---	47	---	232	---	53	52	---
TOTAL	1494	1549	1415	1383	1219	1471	2010	4270	8215	2194	1685	1419
MEAN	48.2	51.6	45.6	44.6	43.5	47.5	67.0	138	274	70.8	54.4	47.3
MAX	55	56	53	54	52	58	96	262	646	95	62	52
MIN	45	49	41	38	35	37	47	65	82	53	50	44
AC-FT	2960	3070	2810	2740	2420	2920	3990	8470	16290	4350	3340	2810

CAL YR 1989	TOTAL 31549	MEAN 86.4	MAX 446	MIN 41	AC-FT 62580
WTR YR 1990	TOTAL 28324	MEAN 77.6	MAX 646	MIN 35	AC-FT 56180

09303400 SOUTH FORK WHITE RIVER NEAR BUDGE'S RESORT, CO

LOCATION.--Lat 39°51'51", long 107°32'00", in NW¼SE¼ sec.19, T.2 S., R.90 W., Rio Blanco County, Hydrologic Unit 14050005, on right bank on downstream side of Forest Service bridge, 300 ft upstream from South Fork Campground, 10 mi above mouth, and about 10.5 mi southeast of Buford.

DRAINAGE AREA.--128 mi².

PERIOD OF RECORD.--May 1976 to current year. Water-quality data available October 1983 to September 1989.

REVISED RECORDS.--WDR CO-79-3: 1976 (M), 1977, 1978 (P), 1978.

GAGE.--Water-stage recorder. Elevation of gage is 7,600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 24, and Jan. 3 to Mar. 14. Records good except for estimated daily discharges, which are poor. No regulation or diversions upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--14 years, 205 ft³/s; 148,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 ft³/s, June 22, 1983, gage height, 6.18 ft; minimum daily, 40 ft³/s, Feb. 1 to Mar. 10, 1980, Dec. 30, 1980, Jan. 10, 15, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 6	2330	*1,580	*5.14	No other peak greater than base discharge.			
Minimum daily, 52 ft ³ /s, Feb 3.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	103	70	63	60	54	71	110	665	162	90	74
2	70	96	65	73	64	58	75	112	547	164	91	71
3	80	86	62	63	52	77	80	117	526	157	88	70
4	95	83	70	64	59	86	84	122	694	174	84	71
5	87	74	61	61	66	76	83	128	876	154	83	75
6	82	72	74	60	59	72	84	148	1040	176	82	73
7	82	71	67	56	69	71	89	192	1130	151	81	70
8	81	73	66	62	65	72	95	200	1080	161	79	70
9	81	72	64	75	59	73	89	183	1020	150	80	70
10	80	72	67	74	64	75	83	185	985	137	79	69
11	77	72	66	70	63	70	85	215	994	130	80	68
12	76	72	67	66	65	67	87	196	932	124	84	66
13	76	71	63	69	66	70	88	185	785	121	83	66
14	74	71	66	68	66	66	90	179	734	118	82	66
15	81	70	67	65	61	63	106	194	648	114	84	65
16	82	82	66	75	61	64	120	187	556	112	85	67
17	77	97	62	79	56	69	129	180	486	110	94	78
18	76	93	64	75	63	65	126	187	453	111	86	75
19	74	89	62	73	65	64	131	189	420	113	80	78
20	76	73	64	69	64	66	139	205	362	107	80	74
21	76	73	66	64	71	67	153	234	327	111	80	71
22	77	73	70	60	75	67	165	340	296	103	80	70
23	76	81	68	59	73	70	173	444	274	103	81	69
24	75	71	63	60	72	68	161	563	250	106	77	70
25	74	73	63	60	77	68	151	615	232	122	74	71
26	79	74	61	59	54	70	138	619	214	105	72	69
27	75	77	69	58	65	72	129	606	200	99	71	70
28	79	76	75	65	59	72	126	654	191	95	70	70
29	78	75	78	62	---	71	119	699	181	93	69	71
30	79	76	77	61	---	69	111	599	170	91	69	72
31	92	---	74	61	---	68	---	587	---	90	71	---
TOTAL	2456	2341	2077	2029	1793	2140	3360	9374	17268	3864	2489	2119
MEAN	79.2	78.0	67.0	65.5	64.0	69.0	112	302	576	125	80.3	70.6
MAX	95	103	78	79	77	86	173	699	1130	176	94	78
MIN	74	70	61	56	52	54	71	110	170	90	69	65
AC-FT	4870	4640	4120	4020	3560	4240	6660	18590	34250	7660	4940	4200

CAL YR 1989 TOTAL 56655 MEAN 155 MAX 988 MIN 46 AC-FT 112400
WTR YR 1990 TOTAL 51310 MEAN 141 MAX 1130 MIN 52 AC-FT 101800

09303500 SOUTH FORK WHITE RIVER NEAR BUFORD, CO

LOCATION.--Lat 39°55'18", long 107°33'04", in NW¼SE¼ sec.36, T.1 S., R.91 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank at upstream side of county bridge, 10 ft downstream from Peltier Creek, and 5.6 mi southeast of Buford.

DRAINAGE AREA.--157 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1903 to October 1906, June 1910 to December 1915, October 1942 to September 1947, April 1967 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1057: 1944-45, WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,480 ft above National Geodetic Vertical Datum of 1929, from topographic map. July 26, 1903, to Oct. 31, 1906, nonrecording gage, and Oct. 1, 1942, to Sept. 30, 1947, water-stage recorder, at site 60 ft upstream at different datums. Records for 1919-20 at site 6.0 mi downstream not equivalent.

REMARKS.--Estimated daily discharges: Nov. 29, Dec. 8-9, 11-12, 21-23, 25-31, and Jan. 1 to Mar. 25. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 600 acres of hay meadows upstream from station.

AVERAGE DISCHARGE.--36 years (water years 1904-06, 1911-15, 1943-47, 1968-90), 266 ft³/s; 192,700 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,620 ft³/s, June 24, 1983, gage height, 7.73 ft; maximum gage height 8.2 ft, June 17, 1906, site and datum then in use; minimum discharge recorded, 56 ft³/s, Dec. 18, 1946, gage height, 1.01 ft, site and datum then in use, but may have been less during periods of no gage-height record.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 7	0430	*1,610	*5.69	No other peak greater than base discharge.			

Minimum daily, 57 ft³/s, Mar. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	121	89	98	91	57	99	152	791	202	122	103
2	102	115	84	106	93	61	108	152	633	202	123	101
3	102	136	86	105	87	81	114	158	584	193	122	99
4	115	119	92	98	84	91	119	162	793	211	119	97
5	111	113	108	88	81	101	118	168	1080	194	116	101
6	106	107	114	87	83	96	119	189	1300	209	114	101
7	104	108	105	80	99	95	122	238	1420	191	112	98
8	105	107	102	89	87	96	129	264	1340	200	110	96
9	104	111	103	102	85	97	130	241	1230	195	110	95
10	103	109	103	107	85	100	120	230	1110	176	109	94
11	102	109	102	105	84	102	119	271	1170	166	110	93
12	101	108	103	106	86	103	122	259	1120	158	112	92
13	102	108	98	106	88	94	123	234	882	153	114	91
14	103	108	101	102	88	87	122	226	818	150	112	90
15	105	100	103	97	81	94	137	236	703	147	114	90
16	113	122	101	113	81	98	152	232	598	146	119	91
17	108	116	96	103	75	100	168	225	503	143	124	101
18	105	128	98	100	84	102	165	225	461	139	120	103
19	103	125	96	90	81	96	171	230	428	147	111	103
20	108	110	99	89	85	106	177	256	382	136	110	102
21	109	107	102	83	94	106	194	283	350	142	111	99
22	109	114	108	78	100	107	214	394	323	134	108	97
23	110	117	104	77	97	113	226	511	297	132	113	95
24	109	110	98	79	96	109	216	705	276	138	107	95
25	108	112	101	77	102	105	208	773	259	151	104	96
26	114	111	87	90	102	106	191	768	244	139	101	94
27	109	106	95	84	101	105	177	736	230	130	99	94
28	114	118	99	80	102	102	172	767	224	125	98	94
29	106	101	102	79	---	100	166	850	217	122	97	94
30	125	102	100	83	---	98	150	691	210	123	96	96
31	123	---	101	83	---	97	---	665	---	124	97	---
TOTAL	3340	3378	3080	2864	2502	3005	4548	11491	19976	4918	3434	2895
MEAN	108	113	99.4	92.4	89.4	96.9	152	371	666	159	111	96.5
MAX	125	136	114	113	102	113	226	850	1420	211	124	103
MIN	101	100	84	77	75	57	99	152	210	122	96	90
AC-FT	6620	6700	6110	5680	4960	5960	9020	22790	39620	9750	6810	5740

CAL YR 1989 TOTAL 76038 MEAN 208 MAX 1140 MIN 83 AC-FT 150800
WTR YR 1990 TOTAL 65431 MEAN 179 MAX 1420 MIN 57 AC-FT 129800

GREEN RIVER BASIN

09303500 SOUTH FORK WHITE RIVER NEAR BUFORD, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
SEP 04...	1520	97	230	8.5	15.0	10.7	120	33	8.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
SEP 04...	2.2	0.1	0.9	113	13	1.8	<0.1	15	142

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
SEP 04...	0.19	37.2	<0.01	<0.1	0.01	<0.2	<0.01	<0.01

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 05...	1047	111	223	8.0	APR 11...	1246	117	178	6.0
NOV 06...	1406	105	207	4.5	MAY 17...	1231	231	237	7.5
DEC 05...	1128	101	220	0.5	JUN 04...	1151	772	190	8.0
JAN 26...	1258	102	229	0.5	JUL 03...	1458	193	208	15.0
FEB 16...	1224	86	232	0.5	AUG 10...	1302	108	268	14.0
MAR 23...	1136	115	182	4.5					

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
SEP 04...	1520	97	2	0.52	78

09304000 SOUTH FORK WHITE RIVER AT BUFORD, CO

LOCATION.--Lat 39°58'28", long 107°37'30", in NW¼NE¼ sec.17, T.1 S., R.91 W., Rio Blanco County, Hydrologic Unit 14050005, on right bank 30 ft downstream from highway bridge, 0.8 mi upstream from mouth, and 1.0 mi south of Buford.

DRAINAGE AREA.--177 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1919 to December 1920 (monthly discharge only, published in WSP 1313), October 1951 to current year.

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,970 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 30, 1920, nonrecording gage at site 200 ft downstream, at different datum. Oct. 1951 to Apr. 1981, at site 500 ft downstream, at different datum.

REMARKS.--Estimated daily discharges: Nov. 28 to Mar. 5 Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 1,100 acres upstream from station, and a small area downstream from station.

AVERAGE DISCHARGE.--40 years, 259 ft³/s; 187,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft³/s, June 26, 1983; gage height, 6.27 ft; maximum gage height, 7.07 ft, June 30, 1957, site and datum then in use, minimum daily discharge, 47 ft³/s, Jan. 15, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 7	0130	*1,310	*4.33	No other peak greater than base discharge.			

Minimum daily, 50 ft³/s, Mar. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	116	105	108	97	50	106	138	767	193	124	102
2	98	122	102	105	98	61	112	134	622	187	124	100
3	99	124	98	110	93	81	116	138	597	184	124	98
4	112	123	100	103	86	91	117	140	789	198	123	98
5	109	115	105	92	87	101	117	143	969	185	117	101
6	104	110	121	91	89	100	116	157	1130	199	121	101
7	104	109	114	82	102	99	117	200	1170	183	121	96
8	102	100	111	93	93	101	123	229	1090	192	116	96
9	102	116	108	107	92	102	128	221	1000	193	113	96
10	102	111	109	113	91	105	121	218	936	172	113	94
11	100	112	107	110	92	106	120	243	957	158	113	92
12	101	111	105	112	92	107	119	240	914	147	115	90
13	101	110	103	110	95	104	120	224	761	144	117	90
14	102	112	104	107	95	94	120	226	714	143	116	90
15	104	105	111	105	88	104	131	238	635	137	119	90
16	113	119	112	118	83	104	143	231	549	137	122	90
17	107	124	109	106	82	99	155	229	477	139	126	96
18	102	107	112	104	86	106	148	227	440	136	124	102
19	99	114	109	92	88	101	154	230	416	145	115	100
20	104	111	106	91	91	111	157	247	376	138	111	100
21	104	110	111	89	99	110	167	290	346	142	112	98
22	107	103	117	84	106	111	180	415	316	133	109	96
23	108	105	113	83	102	117	189	557	288	130	113	93
24	106	112	109	84	101	113	184	712	269	137	108	86
25	104	113	106	83	107	109	176	741	253	150	104	86
26	111	113	92	82	106	113	168	735	238	139	101	86
27	108	104	100	87	109	115	156	722	224	129	100	86
28	110	110	104	85	107	115	152	763	214	129	98	88
29	97	80	107	84	---	114	148	823	205	124	96	90
30	111	82	108	87	---	110	135	671	193	124	96	90
31	103	---	106	91	---	106	---	677	---	124	97	---
TOTAL	3230	3303	3324	2998	2657	3160	4195	11159	17855	4771	3508	2821
MEAN	104	110	107	96.7	94.9	102	140	360	595	154	113	94.0
MAX	113	124	121	118	109	117	189	823	1170	199	126	102
MIN	96	80	92	82	82	50	106	134	193	124	96	86
AC-FT	6410	6550	6590	5950	5270	6270	8320	22130	35420	9460	6960	5600
CAL YR 1989	TOTAL 74438	MEAN 204	MAX 1040	MIN 80	AC-FT 147600							
WTR YR 1990	TOTAL 62981	MEAN 173	MAX 1170	MIN 50	AC-FT 124900							

GREEN RIVER BASIN

09304000 SOUTH FORK WHITE RIVER AT BUFORD, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAR 21...	1645	115	271	8.9	7.0	9.7	140	41	8.9
JUN 14...	0920	833	170	8.2	7.0	9.5	88	26	5.6

DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
MAR 21...	2.4	0.1	1.0	111	32	0.4	0.2	16	168	
JUN 14...	1.0	0.0	0.5	80	8.1	0.6	0.1	7.9	98	

DATE	TIME	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
MAR 21...		0.23	52.3	<0.01	<0.1	<0.01	<0.2	0.01	<0.01
JUN 14...		0.13	220	<0.01	<0.1	<0.01	0.20	0.01	<0.01

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 26...	1001	106	243	5.5	APR 11...	1446	120	196	10.0
NOV 17...	1145	111	290	4.5	MAY 10...	1101	216	241	9.5
DEC 06...	0955	129	259	0.5	29...	1531	852	211	8.0
JAN 16...	1101	118	--	0.5	JUN 28...	0953	217	282	13.0
FEB 07...	1055	106	231	0.5	JUL 19...	1341	143	321	18.5
MAR 01...	1135	50	269	3.5	AUG 08...	1127	114	294	15.0
05...	1441	101	258	4.5	SEP 10...	1330	95	301	17.5

09304000 SOUTH FORK WHITE RIVER AT BUFORD, CO--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 21...	1645	115	12	3.7
JUN 14...	0920	833	64	144
				21

09304200 WHITE RIVER ABOVE COAL CREEK, NEAR MEEKER, CO

LOCATION.--Lat 40°00'18", long 107°49'29", in NW¼NW¼ sec.3, T.1 S., R.93 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank 40 ft downstream from county road bridge, 2.3 mi upstream from Coal Creek, and 5.0 mi southeast of Meeker.

DRAINAGE AREA.--648 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1961, to Sept. 30, 1976, at site 76 ft upstream at datum 2.00 ft, higher.

REMARKS.--Estimated daily discharges: Oct. 1-25, Nov. 15 to Dec. 3, Dec. 8-12, Dec. 18-24, and Dec. 29 to Mar. 2. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 8,000 acres and about 4,000 acres downstream from station.

AVERAGE DISCHARGE.--29 years, 572 ft³/s; 414,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,740 ft³/s, June 26, 1983, gage height, 7.07 ft; minimum daily, 6.5 ft³/s, July 19-21, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 7	0600	*1,930	*4.32				
Minimum daily, 46 ft ³ /s, Sept. 4.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	256	240	303	271	286	304	236	924	220	244	51
2	201	289	274	294	273	291	318	205	787	241	230	49
3	213	308	273	307	260	274	317	191	694	154	183	48
4	252	296	266	287	252	268	341	199	856	173	170	46
5	233	293	304	258	265	278	315	138	1170	159	155	48
6	230	294	313	255	248	282	355	240	1470	172	219	51
7	227	280	297	240	251	277	340	343	1710	160	206	53
8	237	301	309	324	259	257	348	360	1650	174	191	55
9	243	294	300	295	257	277	366	273	1570	195	151	57
10	242	293	301	318	256	277	329	249	1400	181	104	60
11	240	290	292	314	257	275	327	326	1540	146	78	61
12	238	287	290	305	258	279	343	310	1710	136	75	64
13	236	278	252	300	266	273	343	280	1350	121	71	66
14	232	269	295	295	264	273	350	247	1170	111	59	68
15	235	270	296	286	246	265	424	313	1020	94	53	70
16	260	260	270	281	231	265	492	313	877	94	52	71
17	253	295	258	296	228	266	498	259	761	110	51	72
18	240	272	314	280	240	266	466	256	649	174	63	74
19	233	283	306	250	246	264	434	260	555	254	68	77
20	239	285	297	254	260	273	420	306	504	239	67	76
21	260	281	309	248	250	278	431	342	429	258	66	78
22	260	273	327	234	295	249	451	492	352	255	64	76
23	281	270	314	231	286	301	479	635	316	261	62	75
24	290	291	306	236	281	293	461	905	283	286	61	76
25	288	300	227	231	300	279	409	999	263	309	60	83
26	295	307	212	229	295	298	434	972	246	307	59	124
27	300	302	213	243	305	303	308	906	214	292	56	135
28	277	301	258	238	299	310	269	924	186	282	54	148
29	272	214	298	235	---	307	300	1030	171	269	53	156
30	273	216	299	244	---	293	270	858	159	245	52	158
31	288	---	295	255	---	292	---	785	---	241	51	---
TOTAL	7768	8448	8805	8366	7399	8679	11242	14212	24986	6313	3128	2326
MEAN	251	282	284	270	264	280	375	458	833	204	101	77.5
MAX	300	308	327	324	305	310	498	1030	1710	309	244	158
MIN	200	214	212	229	228	249	269	191	159	94	51	46
AC-FT	15410	16760	17460	16590	14680	17210	22300	28190	49560	12520	6200	4610

CAL YR 1989 TOTAL 142551 MEAN 391 MAX 1390 MIN 78 AC-FT 282700
WTR YR 1990 TOTAL 111672 MEAN 306 MAX 1710 MIN 46 AC-FT 221500

09304200 WHITE RIVER ABOVE COAL CREEK NEAR MEEKER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1978 to September 1984, October 1986 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1978 to September 1984.

WATER TEMPERATURES: July 1978 to September 1984.

INSTRUMENTATION.--Water-quality monitor July 1978 to September 1984.

REMARKS.--Unpublished daily maximum and minimum specific conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 511 microsiemens Dec. 24, 1981; minimum 152 microsiemens June 14, 1980.

WATER TEMPERATURES: Maximum, 22.0°C July 8, 1981; minimum, 0.0°C on many days during winter months.

EXTREME OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 544 microsiemens was measured September 5, 1990.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR 05...	0825	363	385	8.3	3.0	10.4	190	59	11
JUN 14...	1425	1130	225	8.4	13.0	8.7	110	33	6.4
SEP 04...	1750	50	495	8.5	20.0	7.1	240	73	14

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
APR 05...	3.9	0.1	1.2	108	79	1.1	0.2	16	236
JUN 14...	2.3	0.1	0.7	81	30	2.0	0.2	11	134
SEP 04...	12	0.3	1.6	156	110	6.3	<0.1	17	327

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
APR 05...	0.32	231	<0.01	<0.1	0.01	<0.2	0.02	<0.01
JUN 14...	0.18	409	<0.01	<0.1	<0.01	<0.2	0.02	0.01
SEP 04...	0.45	44.2	<0.01	<0.1	<0.01	<0.2	0.01	0.02

GREEN RIVER BASIN

09304200 WHITE RIVER ABOVE COAL CREEK NEAR MEEKER, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					MAY				
25...	1216	282	409	8.0	16...	1542	304	349	12.5
NOV					29...	1047	1140	260	8.5
24...	1331	275	391	4.5	JUN				
DEC					06...	1653	1440	230	14.0
26...	1035	183	--	0.5	JUL				
JAN					05...	1056	163	420	16.0
08...	1636	341	393	0.5	AUG				
FEB					08...	1319	183	446	17.0
05...	1544	279	423	0.5	SEP				
MAR					05...	1230	45	544	20.0
02...	1143	246	444	2.5					
APR									
04...	1057	363	371	7.5					

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR					
05...	0825	363	19	19	73
JUN					
14...	1425	1130	29	88	59
SEP					
04...	1750	50	20	2.7	--

09304500 WHITE RIVER NEAR MEEKER, CO

LOCATION.--Lat 40°02'01", long 107°51'42", in NE¼ sec.30, T.1 N., R.93 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank 1.0 mi upstream from Curtis Creek and 2.5 mi east of Meeker.

DRAINAGE AREA.--755 mi².

PERIOD OF RECORD.--June 1901 to December 1906, October 1909 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Meeker" 1901-13.

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,300 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 31, 1906, and May 7 to Aug. 13, 1910, nonrecording gage, and Aug. 14, 1910, to Oct. 19, 1913, water-stage recorder, at site 2.5 mi downstream, at different datum. Oct. 20, 1913, to Sept. 30, 1971, water-stage recorder at present site, at datum 3.00 ft, higher, prior to Oct. 1, 1933, and at datum 2.00 ft, higher, thereafter.

REMARKS.--Estimated daily discharges: Nov. 29 to Feb. 7. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 12,000 acres upstream from station, and about 3,000 acres downstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--86 years, 627 ft³/s; 454,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,950 ft³/s, May 25, 1984, gage height, 6.12 ft, maximum gage height, 7.60 ft, June 16, 1921, present datum; minimum daily discharge, 78 ft³/s, July 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	0700	*1,960	*4.26				
Minimum daily, 124 ft ³ /s, Aug. 14.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	224	329	205	229	275	301	321	315	1110	360	288	167
2	226	296	200	230	280	306	329	293	984	388	279	164
3	240	325	195	240	265	311	346	271	866	302	248	158
4	280	346	200	225	245	316	363	279	1010	318	239	160
5	264	335	220	210	265	318	361	285	1340	306	223	189
6	260	333	260	220	250	322	362	321	1590	320	290	182
7	257	331	270	240	255	307	347	424	1750	323	271	200
8	268	316	265	290	260	307	354	445	1710	349	248	228
9	282	334	258	285	250	313	379	384	1650	368	207	177
10	275	328	267	305	245	312	346	362	1500	340	162	173
11	273	327	260	315	250	321	340	424	1630	309	139	171
12	270	325	250	310	245	315	354	434	1790	282	153	159
13	267	322	240	295	250	304	355	409	1460	259	146	148
14	264	323	255	290	250	289	358	371	1270	248	124	151
15	267	307	270	285	230	304	417	441	1130	245	137	149
16	296	295	280	275	210	300	483	469	976	249	166	208
17	287	335	270	280	210	288	492	402	855	258	181	235
18	273	308	260	290	225	302	467	398	755	318	180	202
19	264	322	245	260	230	292	440	403	672	359	165	192
20	271	324	230	260	240	298	426	450	627	325	152	191
21	296	319	250	255	250	311	447	493	561	330	162	186
22	295	310	260	245	260	316	467	627	497	325	156	190
23	319	307	250	240	255	332	489	750	462	328	171	179
24	329	323	240	240	250	329	479	1020	421	350	166	176
25	327	333	230	235	245	321	429	1120	406	361	160	186
26	336	334	215	230	260	329	476	1090	392	363	157	227
27	337	328	210	250	305	330	381	1040	359	340	151	234
28	341	324	215	240	358	335	328	1060	332	325	151	230
29	316	202	225	235	---	335	368	1200	315	312	149	230
30	313	186	240	256	---	329	343	1040	303	289	145	228
31	315	---	230	255	---	321	---	955	---	285	153	---
TOTAL	8832	9427	7465	8015	7113	9714	11847	17975	28723	9834	5719	5670
MEAN	285	314	241	259	254	313	395	580	957	317	184	189
MAX	341	346	280	315	358	335	492	1200	1790	388	290	235
MIN	224	186	195	210	210	288	321	271	303	245	124	148
AC-FT	17520	18700	14810	15900	14110	19270	23500	35650	56970	19510	11340	11250

CAL YR 1989 TOTAL 163276 MEAN 447 MAX 1410 MIN 138 AC-FT 323900
WTR YR 1990 TOTAL 130334 MEAN 357 MAX 1790 MIN 124 AC-FT 258500

09304800 WHITE RIVER BELOW MEEKER, CO

LOCATION.--Lat 40°00'48", long 108°05'33", in center of sec.31, T.1 N., R.95 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank 30 ft downstream from county bridge, 4.5 mi downstream from Strawberry Creek, and 10 mi west of Meeker.

DRAINAGE AREA.--1,024 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR CO-79-3: Drainage area. WDR CO-86-2: 1985.

GAGE.--Water-stage recorder. Elevation of gage is 5,928 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 28 to Mar. 15. Records good except for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about 22,000 acres upstream from station, and a few small hay meadows downstream from station.

AVERAGE DISCHARGE.--29 years, 664 ft³/s; 481,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,590 ft³/s, June 26, 1983, gage height, 4.97 ft; minimum daily, 85 ft³/s, June 28, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	1200	*2,340	*3.11	No other peak greater than base discharge.			
Minimum daily, 113 ft ³ /s, Aug. 31.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	310	384	277	342	306	345	299	352	1230	355	285	170
2	302	358	270	339	311	318	301	324	1180	517	291	173
3	296	373	262	348	295	312	312	296	1020	409	229	163
4	341	405	274	322	273	330	332	285	1110	411	223	156
5	327	392	304	285	269	370	353	288	1440	382	183	213
6	320	382	356	286	276	370	357	297	1690	395	263	237
7	331	374	371	282	283	350	354	361	1880	448	247	220
8	343	365	359	293	291	325	359	415	1900	466	207	240
9	379	360	349	336	283	350	409	391	1830	481	196	163
10	355	368	361	361	280	330	412	324	1670	422	135	163
11	356	368	356	370	284	325	374	333	1840	329	124	166
12	356	368	337	364	287	325	363	404	2100	288	129	161
13	346	363	331	347	297	310	363	382	1800	246	131	149
14	358	359	353	339	291	290	359	340	1500	231	117	150
15	386	354	374	335	272	270	401	436	1340	227	118	157
16	418	328	385	324	249	280	489	538	1140	249	135	204
17	421	363	379	330	245	276	533	419	1000	253	183	256
18	400	352	374	340	263	271	544	369	869	310	176	225
19	385	365	359	295	272	275	530	362	723	430	165	226
20	387	362	343	288	283	275	501	395	692	367	147	227
21	417	358	370	286	291	279	512	440	615	350	170	230
22	427	349	393	272	307	290	529	578	517	344	140	227
23	422	333	383	265	299	299	532	735	481	344	164	221
24	407	358	367	267	288	312	557	1040	441	356	171	220
25	385	364	352	259	289	311	507	1190	423	363	154	232
26	387	374	330	256	303	310	514	1170	405	381	153	265
27	399	385	319	278	330	310	489	1140	385	353	153	300
28	394	333	330	269	358	312	373	1150	344	330	158	295
29	393	273	348	260	---	315	394	1310	313	312	148	301
30	355	252	366	273	---	314	390	1210	298	295	136	294
31	373	---	350	285	---	306	---	1090	---	286	113	---
TOTAL	11476	10722	10682	9496	8075	9655	12742	18364	32176	10930	5344	6404
MEAN	370	357	345	306	288	311	425	592	1073	353	172	213
MAX	427	405	393	370	358	370	557	1310	2100	517	291	301
MIN	296	252	262	256	245	270	299	285	298	227	113	149
AC-FT	22760	21270	21190	18840	16020	19150	25270	36420	63820	21680	10600	12700

CAL YR 1989 TOTAL 185269 MEAN 508 MAX 1650 MIN 121 AC-FT 367500
WTR YR 1990 TOTAL 146066 MEAN 400 MAX 2100 MIN 113 AC-FT 289700

09304800 WHITE RIVER BELOW MEEKER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to September 1984, October 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1978 to September 1983.

WATER TEMPERATURES: July 1978 to September 1983.

INSTRUMENTATION.--Water-quality monitor July 1978 to September 1983.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 908 microsiemens Aug. 30, 1981; minimum, 221 microsiemens June 13, 1980.

WATER TEMPERATURES: Maximum, 25.0°C Aug. 7, 1978, Aug. 7, 1980; minimum, 0.0°C many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR 04...	1615	370	497	8.7	12.0	9.7	230	66	17
MAY 26...	1555	1260	387	8.3	12.0	8.4	180	50	13
SEP 05...	1725	229	808	8.5	20.5	8.3	380	96	33

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
APR 04...	15	0.4	1.4	124	120	9.0	<0.1	15	318
MAY 26...	9.7	0.3	1.2	125	70	5.2	0.2	13	238
SEP 05...	33	0.7	2.8	224	210	12	0.2	17	538

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
APR 04...	0.43	317	<0.01	<0.1	0.01	0.30	0.02	<0.01
MAY 26...	0.32	809	<0.01	0.10	0.02	0.40	0.02	0.01
SEP 05...	0.73	333	<0.01	<0.1	<0.01	0.50	0.04	0.02

09304800 WHITE RIVER BELOW MEEKER, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					MAY				
04...	1030	337	651	10.5	14...	1510	366	535	15.0
NOV					30...	1817	1100	425	12.5
02...	1041	355	552	2.0	JUN				
DEC					06...	1346	1900	341	15.0
13...	1151	331	629	0.5	JUL				
JAN					09...	1453	487	638	--
17...	1220	321	560	0.5	AUG				
FEB					02...	1519	305	636	21.0
15...	1216	272	490	0.5	SEP				
MAR					06...	1141	226	851	19.5
09...	1049	356	660	5.5					
APR									
10...	1413	408	454	6.0					

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR				
04...	1615	370	59	59
MAY				
26...	1555	1260	186	633
SEP				
05...	1725	229	85	53

09306007 PICEANCE CREEK BELOW RIO BLANCO, CO

LOCATION.--Lat 39°49'34", long 108°10'57", in SE¼SE¼ sec.32, T.2 S., R.96 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 20 ft downstream from private bridge, 1,100 ft upstream from Stewart Gulch, and 14.3 mi west of Rio Blanco.

DRAINAGE AREA.--177 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1974 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,366 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 5-14, 16-19, 21, 23-31, Jan. 1, 3-7, 21-23, 25-28, 30, Feb. 3-6, 9, 15-17, and Feb. 19. Records good except for estimated daily discharges, which are poor. Several diversions upstream from station for irrigation of hay meadows.

AVERAGE DISCHARGE.--16 years, 21.4 ft³/s; 15,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 520 ft³/s July 19, 1977, gage height, 7.01 ft, from rating curve based on indirect measurement of peak flow, maximum gage height, 7.47 ft, May 16, 1984; minimum daily discharge, 0.08 ft³/s, Sept. 15, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 16	1830	*154	*3.90	No other peak greater than base discharge.			
Minimum daily, 0.08 ft ³ /s, Sept. 15.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	4.4	6.2	7.0	3.5	6.4	4.8	1.0	6.2	5.5	5.2	3.1
2	6.0	4.4	6.9	7.0	3.5	6.1	4.6	.84	6.0	5.3	5.0	3.1
3	5.7	4.7	5.3	7.0	4.0	5.8	4.4	.91	5.7	6.0	4.2	3.1
4	6.5	5.8	6.4	6.5	3.5	7.8	4.2	1.0	5.7	6.6	3.7	3.5
5	6.7	7.2	6.5	6.5	3.0	7.1	3.7	1.0	5.7	6.2	3.6	4.4
6	6.7	7.2	6.0	7.0	3.5	5.8	3.0	.91	5.6	5.6	3.9	4.3
7	6.9	5.4	6.2	6.5	2.9	5.4	1.0	.96	5.7	6.2	3.3	4.1
8	7.2	5.9	6.5	7.1	2.8	6.1	.32	3.6	5.7	6.9	3.5	4.2
9	7.2	4.9	6.2	6.9	3.0	7.0	.43	2.8	5.7	6.8	3.5	4.3
10	7.4	4.8	6.5	6.6	2.6	8.0	.57	2.4	5.7	6.1	2.3	5.1
11	8.2	4.0	6.7	6.4	3.2	14	.75	2.6	6.0	5.0	2.7	5.3
12	8.4	1.6	7.0	5.9	3.2	13	1.0	3.6	6.5	5.0	2.3	5.3
13	11	1.9	6.6	6.1	3.3	9.6	1.1	4.2	6.1	5.7	1.5	5.0
14	13	4.9	7.2	5.8	2.3	8.9	2.0	4.2	5.9	5.6	1.4	3.2
15	11	4.1	7.8	5.7	2.5	6.4	3.9	3.4	6.0	5.6	1.8	.08
16	12	3.5	8.0	5.7	3.0	6.5	3.6	2.6	5.8	7.1	2.0	15
17	12	4.9	7.5	5.8	4.0	5.7	3.3	2.3	5.7	6.7	2.0	15
18	12	3.7	8.0	6.4	5.8	5.6	2.9	4.0	5.8	7.0	2.1	9.2
19	11	5.5	8.0	5.7	5.0	5.4	2.0	4.5	6.1	7.5	1.8	7.8
20	11	4.8	8.4	4.3	5.1	5.8	2.5	4.4	6.3	7.1	2.0	4.6
21	11	4.3	7.4	4.5	5.3	8.0	2.7	5.8	6.1	6.9	2.4	1.6
22	12	3.7	6.4	5.0	5.1	8.0	2.6	6.2	6.4	6.2	2.8	.18
23	12	6.2	7.5	5.0	5.4	5.3	2.3	6.3	6.1	6.3	2.8	1.1
24	11	4.7	7.0	5.2	6.0	4.5	2.3	6.1	4.7	6.6	2.1	2.3
25	12	5.7	7.5	5.0	7.3	4.3	2.1	6.0	5.9	7.1	2.3	5.0
26	12	6.4	7.0	5.0	7.5	4.7	2.1	5.9	5.9	6.3	1.7	3.3
27	12	6.0	7.0	4.5	7.5	4.8	1.9	5.8	6.0	5.8	1.8	2.0
28	12	6.3	7.0	4.0	7.0	5.2	1.6	6.0	6.5	5.0	1.7	1.3
29	11	5.3	6.5	3.1	---	5.3	1.5	6.1	6.5	4.4	1.9	1.3
30	11	5.1	7.0	4.5	---	5.3	1.1	6.0	6.0	4.1	2.0	.98
31	9.5	---	6.5	4.0	---	4.9	---	6.0	---	4.6	2.2	---
TOTAL	301.7	147.3	214.7	175.7	120.8	206.7	70.27	117.42	178.0	186.8	81.5	128.74
MEAN	9.73	4.91	6.93	5.67	4.31	6.67	2.34	3.79	5.93	6.03	2.63	4.29
MAX	13	7.2	8.4	7.1	7.5	14	4.8	6.3	6.5	7.5	5.2	15
MIN	5.7	1.6	5.3	3.1	2.3	4.3	.32	.84	4.7	4.1	1.4	.08
AC-FT	598	292	426	349	240	410	139	233	353	371	162	255

CAL YR 1989 TOTAL 4252.17 MEAN 11.6 MAX 54 MIN .10 AC-FT 8430
WTR YR 1990 TOTAL 1929.63 MEAN 5.29 MAX 15 MIN .08 AC-FT 3830

09306007 PICEANCE CREEK BELOW RIO BLANCO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1974 to September 1985.

pH: December 1974 to September 1984.

WATER TEMPERATURE: December 1974 to September 1985.

DISSOLVED OXYGEN: December 1974 to September 1984.

SUSPENDED SEDIMENT DISCHARGE: April 1974 to September 1985.

INSTRUMENTATION.--Automatic pumping sediment sampler April 1974 to September 1985. Water-quality monitor December 1974 to September 1985.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,690 microsiemens June 21, 1976; minimum, 344 microsiemens Apr. 13, 1976.

pH: Maximum, 9.0 units June 21, 1976; minimum, 7.0 units May 24, 1976.

WATER TEMPERATURES: Maximum, 29.5°C July 25, 1977; minimum, freezing point on many days during winter months each year.

DISSOLVED OXYGEN: Maximum, 15.7 mg/L Oct. 8, 1975; minimum, 5.1 mg/L July 17, 1979.

SEDIMENT CONCENTRATIONS: Maximum daily, 20,300 mg/L July 20, 1974; minimum daily, 6 mg/L several days during September 1976.

SEDIMENT LOADS: Maximum daily, 18,600 tons May 16, 1984; minimum daily, 0.02 ton Apr. 20, 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 18...	1235	8.0	1220	8.5	0.0	11.5	420	83	52	110
MAR 20...	1200	6.8	1230	8.5	10.0	8.7	440	85	54	120
JUN 21...	1010	7.0	1270	8.5	13.5	9.4	410	71	55	130
AUG 02...	1100	5.0	1200	8.5	15.5	8.9	400	73	52	120

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 18...	2	1.9	372	280	20	0.8	15	792	1.08
MAR 20...	3	2.3	383	310	18	0.8	14	839	1.14
JUN 21...	3	1.6	356	280	21	0.8	13	788	1.07
AUG 02...	3	2.7	379	270	22	0.7	8.4	778	1.06

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
DEC 18...	17.1	0.01	0.96	0.07	0.70	0.02	0.02	180	1800
MAR 20...	15.4	0.01	0.70	0.04	1.4	0.02	0.02	180	1900
JUN 21...	14.9	<0.01	<0.1	0.01	0.40	<0.01	0.02	200	1600
AUG 02...	10.5	<0.01	<0.1	0.02	0.40	<0.01	<0.01	200	1600

09306007 PICEANCE CREEK BELOW RIO BLANCO, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 18...	1	90	<1	8	14	44	6	<1	12
JUN 21...	2	85	<1	9	17	40	5	2	4

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 04...	1441	6.9	1240	14.0	APR 12...	1414	0.86	1220	17.5
NOV 03...	1051	4.2	1270	5.0	MAY 02...	0937	0.87	1440	9.0
DEC 15...	1201	7.7	--	2.5	JUN 13...	1100	6.1	1190	15.0
JAN 08...	1307	6.5	1180	0.5	JUL 11...	1157	5.2	1240	21.0
FEB 09...	1300	9.7	1330	1.0	SEP 04...	1346	3.5	1200	20.0
MAR 08...	1111	5.2	1160	7.5					

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 18...	1235	8.0	674	15	9
MAR 20...	1200	6.8	100	1.8	--
MAR 20...	1201	6.8	117	2.1	--
JUN 21...	1009	7.0	29	0.55	--
JUN 21...	1010	7.0	27	0.51	--
AUG 02...	1100	5.0	23	0.31	45
AUG 02...	1101	5.0	17	0.23	--

GREEN RIVER BASIN

09306022 STEWART GULCH ABOVE WEST FORK NEAR RIO BLANCO, CO

LOCATION.--Lat 39°49'09", long 108°11'08", in SE¼NE¼ sec.5, T.3 S., R.96 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 0.6 mi upstream from mouth, about 300 ft above confluence with West Fork Stewart Gulch, and 14.2 mi west of Rio Blanco.

DRAINAGE AREA.--44.0 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1982.

pH: October 1974 to March 1982.

WATER TEMPERATURE: October 1974 to September 1982.

DISSOLVED OXYGEN: October 1974 to March 1982.

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1982.

INSTRUMENTATION.--Water-quality monitor October 1974 to September 1982. Pumping sediment sampler October 1974 to September 1982.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,200 microsiemens Nov. 10, 1975; minimum, 583 microsiemens Feb. 22, 1982.

pH: Maximum, 8.9 units Dec. 9, 11, 1979; minimum, 7.6 units Oct. 7, 1975.

WATER TEMPERATURES: Maximum, 20.5°C July 3, 1976, June 3, 1977; minimum, 0.0°C Jan. 9, Dec. 17, 1977, Mar. 3, Dec. 2, 3, 1978, Jan. 29, 1979.

DISSOLVED OXYGEN: Maximum, 16.6 mg/L Jan. 13, 1976; minimum, 3.6 mg/L Aug. 19, 20, 1977.

SEDIMENT CONCENTRATIONS: Maximum daily, 1,350 mg/L June 8, 1975; minimum daily, no flow Aug. 7-9, 1975.

SEDIMENT LOADS: Maximum daily, 10 tons estimated June 8, 1975; minimum daily, no flow Aug. 7-9, 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 12...	1405	2.5	1320	8.4	6.5	10.2	530	92	71	120
MAR 20...	1015	2.9	1340	8.4	10.0	10.7	530	92	72	120

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 12...	2	1.2	374	390	8.9	0.3	16	938	1.28
MAR 20...	2	1.1	381	340	14	0.2	15	896	1.22

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
DEC 12...	6.33	<0.01	2.60	0.01	0.50	0.02	<0.01	90	2700
MAR 20...	7.01	<0.01	2.20	0.01	0.80	0.02	0.01	90	2900

09306022 STEWART GULCH ABOVE WEST FORK NEAR RIO BLANCO, CO--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAR 20...	1015	2.9	58	0.45	MAR 20...	1016	2.9	67	0.52

09306042 PICEANCE CREEK TRIBUTARY NEAR RIO BLANCO, CO

LOCATION.--Lat 39°50'01", long 108°13'12", in SE¼NE¼ sec.36, T.2 S., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 600 ft upstream from mouth and 16.2 mi west of Rio Blanco.

DRAINAGE AREA.--1.06 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1974 to August 1984, May 1985 to current year.

REVISED RECORDS.--WDR CO-79-3: 1977 (M). WDR CO-86-2: 1984-85 (M).

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Elevation of gage is 6,335 ft above National Geodetic Vertical Datum of 1929, from topographic map. Nov. 10, 1980 to June 10, 1981 at datum 0.21 ft, lower.

REMARKS.--Estimated daily discharges: Nov. 3-7, 9-14, 16-18, 21, 23-26, Nov. 28 to Dec. 13, Dec. 17, Jan. 4, 5, 23-24, and Dec. 26-29. Records fair except for estimated daily discharges, which are poor. Most flow this year due to discharge from settling ponds on tract Cb, except for summer thunderstorms.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 506 ft³/s, Aug. 1, 1984, gage height, 6.38 ft, on basis of slope-area measurement of peak flow; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21 ft³/s at 1100 Sept. 2, gage height, 2.44 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.23	.25	.21	.17	.17	.10	.16	.24	.24	.18	.24
2	.17	.32	.22	.15	.14	.24	.23	.16	.24	.08	.19	.37
3	.18	.25	.23	.13	.18	.16	.18	.13	.19	.23	.20	.17
4	.18	.23	.22	.20	.17	.18	.17	.14	.24	.54	.12	.14
5	.19	.22	.22	.20	.27	.03	.16	.14	.27	.37	.11	.16
6	.17	.22	.25	.16	.23	.12	.09	.15	.23	.29	.21	.10
7	.14	.25	.20	.12	.26	.12	.06	.18	.24	.27	.09	.08
8	.14	.27	.20	.13	.28	.17	.13	.17	.23	.24	.12	.12
9	.15	.25	.25	.15	.21	.19	.18	.18	.25	.22	.12	.11
10	.14	.25	.22	.17	.23	.22	.15	.17	.27	.22	.15	.07
11	.15	.22	.23	.16	.20	.25	.14	.19	.18	.22	.25	.08
12	.16	.21	.22	.18	.20	.14	.12	.22	.28	.19	.36	.03
13	.18	.23	.22	.22	.21	.14	.13	.21	.09	.24	1.1	.24
14	.17	.22	.21	.20	.13	.11	.12	.21	.14	.21	.22	.08
15	.18	.22	.21	.19	.11	.16	.11	.24	.16	.20	.22	.09
16	.19	.25	.18	.13	.11	.11	.15	.23	.17	.43	.24	.00
17	.22	.23	.25	.29	.23	.09	.17	.22	.15	.10	.20	.00
18	.23	.23	.27	.14	.21	.09	.21	.19	.14	.16	.22	.00
19	.41	.26	.15	.19	.21	.09	.19	.20	.17	.29	.22	.00
20	.21	.28	.18	.31	.22	.37	.25	.21	.19	.30	.20	.00
21	.13	.22	.18	.23	.21	.10	.43	.22	.18	.47	.98	.00
22	.13	.20	.23	.28	.22	.12	.50	.29	.20	.13	1.3	.00
23	.23	.20	.24	.22	.21	.15	.20	.23	.20	.12	.40	.00
24	.15	.22	.18	.22	.24	.22	.14	.18	.21	.16	1.0	.00
25	.18	.25	.24	.26	.24	.14	.14	.21	.22	.30	.32	.00
26	.21	.22	.19	.25	.23	.10	.20	.20	.21	.27	.22	.01
27	.21	.15	.26	.25	.20	.15	.17	.19	.19	.17	1.7	.01
28	.19	.20	.21	.25	.19	.21	.15	.21	.26	.23	.44	.02
29	.13	.25	.21	.22	---	.26	.16	.18	.24	.17	.22	.01
30	.22	.25	.19	.23	---	.18	.21	.22	.27	.26	.18	.01
31	.36	---	.22	.28	---	.12	---	.22	---	.26	.09	---
TOTAL	5.88	7.00	6.73	6.32	5.71	4.90	5.34	6.05	6.25	7.58	11.57	2.14
MEAN	.19	.23	.22	.20	.20	.16	.18	.20	.21	.24	.37	.071
MAX	.41	.32	.27	.31	.28	.37	.50	.29	.28	.54	1.7	.37
MIN	.13	.15	.15	.12	.11	.03	.06	.13	.09	.08	.09	.00
AC-FT	12	14	13	13	11	9.7	11	12	12	15	23	4.2

CAL YR 1989 TOTAL 64.52 MEAN .18 MAX .57 MIN .00 AC-FT 128
WTR YR 1990 TOTAL 75.47 MEAN .21 MAX 1.7 MIN .00 AC-FT 150

09306042 PICEANCE CREEK TRIBUTARY NEAR RIO BLANCO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1974 to August 1984, April 1985 to February 1986.

pH: February to September 1981.

WATER TEMPERATURE: April 1974 to August 1984, April 1985 to February 1986.

SUSPENDED-SEDIMENT DISCHARGE: April 1974 to September 1982.

INSTRUMENTATION.--Water-quality monitor April 1974 to February 1986. Pumping sediment sampler April 1974 to September 1982.

REMARKS.--Unpublished maximum and minimum values of specific conductance for periods of daily record are available in the district office. Water-quality monitor was moved February 21, 1986 to the discharge pipe of a settling pond on Occidental Petroleum's tract C-b oil shale lease. Daily monitor data subsequent to February 20, 1986 are site specific and not published in this report.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,570 microsiemens Sept. 16, 1980; minimum observed, 220 microsiemens Jan. 26, 1982.

WATER TEMPERATURES: Maximum, 35.0°C Aug. 6, 1985; minimum, 0.0°C many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 28,000 mg/L estimated Sept. 3, 1978; no flow many days dry years.

SEDIMENT LOADS: Maximum daily, 900 tons, estimated, Sept. 3, 1978; no flow many days dry years.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
DEC 18...	1420	0.17	2320	9.1	1.0	10.9	52	7.6	7.5	610	38
MAR 19...	1515	0.11	2200	9.1	16.5	7.4	42	6.6	6.0	580	39
JUN 21...	1145	0.15	2570	9.2	27.0	6.3	51	7.6	7.4	680	42
AUG 02...	1245	0.25	2580	9.2	28.5	6.1	46	6.7	6.7	610	40

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
DEC 18...	1.5	1310	32	7.7	19	0.07	13	1490	2.03	0.68
MAR 19...	1.5	1220	27	7.6	19	--	13	1400	1.90	0.41
JUN 21...	2.8	1360	57	11	25	--	10	1620	2.20	0.66
AUG 02...	2.1	1400	22	10	18	0.06	13	1530	2.08	1.03

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	BORON, DIS- SOLVED (UG/L AS B)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
DEC 18...	0.05	0.76	0.18	0.60	0.04	<0.01	3.4	--	730	1300
MAR 19...	0.03	0.70	0.02	0.40	<0.01	<0.01	--	--	730	1000
JUN 21...	0.01	0.10	<0.01	0.30	<0.01	0.02	--	--	810	1200
AUG 02...	<0.01	<0.1	0.02	0.50	<0.01	<0.01	5.4	<1	800	1200

GREEN RIVER BASIN

09306042 PICEANCE CREEK TRIBUTARY NEAR RIO BLANCO, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CO)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
------	-----------------------------------------------------	----------------------------------------------	----------------------------------------------	------------------------------------------------------	----------------------------------------------	-----------------------------------------------------	----------------------------------------------	----------------------------------------------	--------------------------------------------

DEC 18...	<10	<1	800	10	<1	1	<1	1	10
AUG 02...	<10	<1	700	<10	<1	<1	1	2	20

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
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DEC 18...	<1	50	<10	<0.1	1	1	<1	--	10
AUG 02...	<1	50	<10	<0.1	1	<1	<1	6	<10

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 05...	1300	0.21	2460	15.5	JUN 13...	1230	0.13	2450	25.5
NOV 14...	1336	0.20	2420	7.0	JUL 11....	1230	0.20	2540	28.0
FEB 07...	1235	0.19	2450	1.5	SEP 05...	1115	0.11	2430	23.0
APR 12...	1305	0.12	2370	19.0					
MAY 09...	1215	0.16	2430	18.5					

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT, DIS- SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 18...	1420	0.17	53	0.02	--
MAR 19...	1515	0.11	134	0.04	--
JUN 21...	1145	0.15	115	0.05	47
JUN 21...	1146	0.15	108	0.04	61
AUG 02...	1245	0.25	1270	0.86	36
AUG 02...	1246	0.25	1290	0.87	--

09306058 WILLOW CREEK NEAR RIO BLANCO, CO

LOCATION.--Lat 39°50'14", long 108°14'37", in NW¼NE¼ sec.35, T.2 S., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on right bank 1,500 ft upstream from mouth and 17.4 mi west of Rio Blanco.

DRAINAGE AREA.--48.4 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to September 1985, October 1986 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1974 to September 1982.

pH: March 1976 to February 1982.

WATER TEMPERATURE: November 1974 to September 1982.

DISSOLVED OXYGEN: March 1976 to February 1982.

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1982.

INSTRUMENTATION.--Water-quality monitor November 1974 to September 1982. Pumping sediment sampler October 1974 to September 1982.

REMARKS.--Unpublished daily maximum and minimum specific conductance data for period of daily record are available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,920 microsiemens July 14, 1976; minimum, 528 microsiemens Mar. 18, 1976.

pH: Maximum, 8.8 units Mar. 11, 1980; minimum, 7.4 units June 4, 6, 1980.

WATER TEMPERATURES: Maximum, 30.5°C July 4, 1982; minimum, 0.0°C on many days during winter months each year.

DISSOLVED OXYGEN: Maximum, 12.9 mg/L Mar. 29, 1979; minimum, 3.6 mg/L Sept. 29, 1978.

SEDIMENT CONCENTRATIONS: Maximum daily, 7,030 mg/L July 29, 1979; no flow many days during 1978.

SEDIMENT LOADS: Maximum daily, 61 tons July 29, 30, 1979; no flow many days during 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 12...	1225	0.85	1370	8.5	6.0	11.0	570	97	78	130
MAR 20...	1435	3.5	1200	8.5	12.5	8.0	470	85	62	100

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 12...	2	1.4	390	390	12	0.4	16	963	1.31
MAR 20...	2	1.7	366	280	15	0.2	15	784	1.07

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
DEC 12...	2.21	<0.01	0.30	<0.01	0.20	0.02	<0.01	130	3200
MAR 20...	7.40	<0.01	0.50	0.02	<0.2	0.04	0.05	110	2700

09306058 WILLOW CREEK NEAR RIO BLANCO, CO--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAR 20...	1435	3.5	605	5.7	MAR 20...	1436	3.5	593	5.6

09306061 PICEANCE CREEK ABOVE HUNTER CREEK NEAR RIO BLANCO, CO

LOCATION.--Lat 39°51'02", long 108°15'31", in SE¼NE¼ sec.27, T.2 S., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 120 feet downstream from private bridge, 0.4 mi upstream from Hunter Creek, and 18.7 mi west of Rio Blanco.

DRAINAGE AREA.--309 mi²

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1985.

pH: October 1974 to September 1984.

WATER TEMPERATURE: October 1974 to September 1985.

DISSOLVED OXYGEN: October 1974 to September 1984.

SUSPENDED-SEDIMENT DISCHARGE: April 1974 to September 1985.

INSTRUMENTATION.--Automatic pumping sediment sampler April 1974 to September 1985. Water-quality monitor October 1974 to September 1985.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum 1,980 microsiemens Jan. 15, 1976; minimum, 440 microsiemens Apr. 19, 1985.

pH: Maximum, 8.9 units Dec. 7, 1977; minimum, 7.4 units Apr. 18, 1979.

WATER TEMPERATURES: Maximum, 26.5°C June 26, 1977; minimum, freezing point on many days during winter months.

DISSOLVED OXYGEN: Maximum, 16.5 mg/L Mar. 21, 22, 1976; minimum, 3.1 mg/L Sept. 10, 1978.

SEDIMENT CONCENTRATIONS: Maximum daily, 15,000 mg/L May 2, 1986; minimum daily, no flow Oct. 4, 5, 1977.

SEDIMENT LOADS: Maximum daily, 27,000 tons estimated Sept. 3, 1977; minimum daily, no flow Oct. 4, 5, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)
DEC 12...	1050	14	1420	8.5	0.0	11.4	520	89	72	160
MAR 20...	1605	19	1330	8.5	13.0	8.4	470	82	64	140

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 12...	3	2.4	437	370	17	1.0	17	998	1.36
MAR 20...	3	2.3	341	350	15	0.7	15	880	1.20

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
DEC 12...	36.9	<0.01	1.00	<0.01	0.30	0.02	0.02	190	2500
MAR 20...	44.7	0.01	0.80	0.02	<0.2	0.03	0.02	160	2400

GREEN RIVER BASIN

09306061 PICEANCE CREEK ABOVE HUNTER CREEK NEAR RIO BLANCO, CO

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAR 20...	1605	19	325	16

09306200 PICEANCE CREEK BELOW RYAN GULCH, NEAR RIO BLANCO, CO

LOCATION.--Lat 39°55'16", long 108°17'49", in sec.32, T.1 S., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank at downstream side of bridge, 40 ft downstream from Ryan Gulch, and 23 mi northwest of Rio Blanco.

DRAINAGE AREA.--506 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

REVISED RECORDS.--WDR CO-79-3: 1977 (M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,070 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 28 to Dec. 4, Dec. 12-14, Dec. 17 to Jan. 9, Jan. 19-20, Jan. 22 to Feb. 7, Feb. 16-19, and Feb. 25 to Mar. 1. Records fair except for estimated daily discharges, which are poor. Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--26 years, 31.5 ft³/s; 22,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 550 ft³/s, May 5, 1985, gage height, 7.70 ft; maximum gage height, 7.81 ft, May 28, 1983; minimum daily discharge, 0.15 ft³/s, June 7, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 16	2330	*119	*5.34	No other peak greater than base discharge.			
Minimum daily, 2.3 ft ³ /s, Aug. 31.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	17	20	16	22	23	21	8.9	8.2	7.7	4.6	2.6
2	9.6	22	22	16	23	26	20	8.3	6.3	8.0	4.6	3.0
3	9.5	22	24	16	20	24	20	7.9	6.1	8.3	5.2	3.2
4	10	22	20	16	22	28	15	8.1	5.9	10	5.9	3.1
5	10	21	22	14	22	28	12	8.2	5.9	8.8	5.9	10
6	11	21	23	14	22	26	11	7.6	5.9	7.8	5.9	4.5
7	11	21	23	14	22	23	11	7.1	5.9	10	4.6	3.3
8	12	20	24	15	21	23	11	6.9	6.6	12	4.4	3.0
9	11	21	22	16	21	25	14	7.5	7.9	12	4.4	3.2
10	10	20	23	15	21	28	10	5.4	8.7	10	4.6	3.7
11	9.7	20	24	14	21	28	9.4	3.3	8.4	9.9	4.6	4.5
12	10	19	22	14	23	30	9.0	5.6	10	10	5.2	4.9
13	11	19	24	14	22	27	9.4	4.9	10	9.5	4.9	5.1
14	11	19	22	14	20	23	9.3	4.7	8.9	8.7	4.9	4.4
15	13	20	24	13	20	24	9.2	5.1	8.6	7.9	6.0	4.6
16	15	20	20	13	20	23	8.9	5.5	9.2	7.5	6.8	14
17	16	19	20	13	20	24	9.3	5.8	9.1	8.9	11	32
18	17	18	18	13	20	24	9.1	5.4	8.7	7.4	11	18
19	16	18	16	13	20	24	8.5	7.4	8.1	8.6	10	7.5
20	15	18	18	13	21	24	8.0	7.0	9.1	8.0	9.7	5.8
21	14	18	18	12	21	25	8.4	9.1	9.4	6.2	9.8	5.8
22	14	17	18	15	21	25	8.6	9.3	8.0	6.3	9.4	5.8
23	14	17	16	14	21	24	8.4	11	8.5	6.3	9.3	5.7
24	16	18	16	16	22	22	10	11	8.8	6.6	9.3	5.8
25	15	18	16	13	22	22	10	11	8.9	5.5	8.9	5.8
26	16	19	14	15	22	22	8.3	11	9.0	4.6	8.5	5.8
27	15	20	14	18	22	22	8.3	10	8.5	4.0	8.0	5.8
28	15	20	14	15	22	22	8.6	9.2	8.0	4.9	5.5	5.9
29	15	24	16	16	---	21	9.2	8.0	7.9	5.2	5.2	5.8
30	15	20	18	18	---	21	9.3	7.6	8.0	4.6	2.6	5.8
31	15	---	18	20	---	21	---	6.8	---	4.1	2.3	---
TOTAL	400.4	588	609	458	596	752	324.2	234.6	242.5	239.3	203.0	198.4
MEAN	12.9	19.6	19.6	14.8	21.3	24.3	10.8	7.57	8.08	7.72	6.55	6.61
MAX	17	24	24	20	23	30	21	11	10	12	11	32
MIN	8.6	17	14	12	20	21	8.0	3.3	5.9	4.0	2.3	2.6
AC-FT	794	1170	1210	908	1180	1490	643	465	481	475	403	394

CAL YR 1989 TOTAL 7727.1 MEAN 21.2 MAX 115 MIN 6.3 AC-FT 15330
WTR YR 1990 TOTAL 4845.4 MEAN 13.3 MAX 32 MIN 2.3 AC-FT 9610

09306200 PICEANCE CREEK BELOW RYAN GULCH NEAR RIO BLANCO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1970 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1979 to September 1982, November 1985 to current year.

WATER TEMPERATURE: December 1979 to September 1982, November 1985 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1972 to September 1983.

INSTRUMENTATION.--Automatic pumping sediment sampler October 1972 to September 1983. Water-quality monitor December 1979 to September 1982, November 1985 to current year.

REMARKS.--Unpublished maximum and minimum specific conductance data for the periods of daily record are available in the district office. Interruptions in the daily record are due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum 2,920 microsiemens July 18, 1981; minimum, 520 microsiemens July 18, 1981.

WATER TEMPERATURES: Maximum 28.0°C Sept. 4, 1990, minimum, 0.0°C on many days during the winter period.

SEDIMENT CONCENTRATIONS: Maximum daily, 21,700 mg/L July 20, 1977; minimum daily, 8 mg/L Oct. 14, 1979, several days in Sept. 1981.

SEDIMENT LOADS: Maximum daily, 5,390 tons July 23, 1983; minimum daily, 0.05 ton Sept. 27, 30, 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum 2,090 microsiemens June 18, 20; minimum, 540 microsiemens Sept. 17, 18.

WATER TEMPERATURES: Maximum 28.0°C Sept 4; minimum, 0.0°C several days during the winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 20...	1130	25	1520	8.5	0.0	11.3	540	88	76	160
APR 04...	1345	13	1590	8.5	10.0	9.3	550	84	82	160
JUN 13...	1500	13	1880	8.5	22.0	9.1	570	77	91	240
AUG 01...	1400	4.6	1960	8.5	21.5	9.7	560	68	94	280

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 20...	3	2.0	442	410	18	0.9	17	1040	1.42
APR 04...	3	2.6	419	400	17	0.4	15	1020	1.38
JUN 13...	4	2.9	535	480	22	0.7	18	1260	1.71
AUG 01...	5	3.3	617	470	26	0.8	11	1330	1.80

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
DEC 20...	70.5	<0.01	0.94	0.06	0.80	0.03	0.03	180	3000
APR 04...	37.1	<0.01	0.50	0.02	0.30	0.02	0.01	170	3400
JUN 13...	44.1	<0.01	<0.1	0.02	0.30	0.04	0.03	260	3200
AUG 01...	16.5	<0.01	<0.1	0.01	0.50	0.06	0.06	310	3200

09306200 PICEANCE CREEK BELOW RYAN GULCH NEAR RIO BLANCO, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 20...	1	71	1	7	14	28	6	1	6
JUN 13...	2	70	<1	7	17	65	7	2	6

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT, CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. STIEVE DIAM. % FINER THAN .062 MM
DEC 20...	1130	25	238	16	--
APR 04...	1345	13	95	3.5	65
JUN 13...	1500	13	56	2.0	69
AUG 01...	1401	4.6	62	0.77	--
01...	1400	4.6	34	0.42	--

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1860	1740	1650	1430	1440	1260	1510	1760	1820	1790	1950	1940
2	1850	1690	1610	1400	1430	1290	1510	1770	1920	1790	1950	1930
3	1850	1660	1580	1400	---	1370	1520	1780	1940	1770	1940	1930
4	1840	1640	1550	---	---	1370	1550	1760	1990	1730	1970	1960
5	1830	1650	1520	---	---	1300	1610	1740	2020	1720	2010	1650
6	1800	1670	1500	---	---	1370	1650	1760	2020	1800	2020	1510
7	1800	1670	1490	---	---	1450	1660	1790	1970	1770	1950	1900
8	1800	1670	1510	---	1430	1480	1620	1800	1970	1730	1930	1910
9	1800	1650	1530	---	1450	1490	1590	1770	1930	1700	1910	1920
10	1800	1650	1520	1450	1450	1470	1650	1810	1880	1720	1910	1910
11	1810	1640	1500	1440	1480	1480	1640	1810	1890	1730	1920	1910
12	1800	1630	1510	1450	1450	1430	1610	1870	1870	1740	1900	1910
13	1810	1640	1520	1460	1410	1460	1580	1840	1900	1740	1910	1910
14	1810	1650	1540	1440	1460	1490	1580	1870	1960	1770	1930	1910
15	1790	1700	1540	1460	1500	1490	1580	1870	1950	1780	1880	1900
16	1780	1670	---	1470	1510	1510	1640	1910	1960	1790	1840	1830
17	1780	1670	---	1470	1450	1490	1660	1910	1970	1760	1720	1090
18	1760	1680	---	1500	1430	1490	1670	1940	2010	1790	1710	1200
19	1730	1680	---	1480	1430	1480	1690	1870	2030	1760	1710	1700
20	1730	1680	1510	1470	1440	1460	1710	1860	1970	1770	1700	1790
21	1780	1680	1490	1520	1450	1450	1710	1800	1960	1800	1690	1810
22	1810	1670	1460	1500	1470	1450	1740	1740	1910	1810	1680	1800
23	1800	1660	1450	1480	1470	1460	1760	1710	1910	1820	1690	1800
24	1780	1660	1440	1480	1450	1480	1720	1720	1890	1840	1670	1790
25	1770	1660	1460	1590	1390	1500	1730	1730	1900	1900	1680	1770
26	1750	1640	1470	1470	1220	1510	1800	1720	1910	1940	1680	1770
27	1740	1630	1450	1480	1130	1500	1790	1710	1870	1950	1690	1770
28	1750	1630	1430	1530	1130	1500	1770	1740	1850	1930	1800	1760
29	1720	1630	1410	1450	---	1500	1750	1810	1820	1890	1820	1760
30	1710	1640	1410	1500	---	1500	1760	1850	1800	1930	1930	1770
31	1740	---	1460	1430	---	1510	---	1860	---	1950	1960	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.1	6.7	6.9	.5	.0	.0	.0	.0	4.3	.0	7.8	.0
2	15.4	5.5	6.9	.0	.0	.0	.0	.0	3.7	.0	6.3	.6
3	14.2	5.3	6.6	.4	.0	.0	.0	.0	.0	.0	5.4	2.2
4	15.0	7.4	6.5	1.8	1.2	.0	.0	.0	.0	.0	10.2	2.8
5	14.2	4.3	8.1	2.3	4.6	.1	.0	.0	.0	.0	7.5	2.4
6	13.8	3.7	9.5	5.2	5.2	2.2	.0	.0	.0	.0	5.1	.0
7	14.9	5.2	6.6	3.4	4.1	.6	.0	.0	---	---	7.7	.0
8	14.3	4.1	5.2	.3	2.3	.0	.0	.0	4.0	.0	10.9	2.5
9	14.7	4.3	9.5	4.0	3.3	.6	1.8	.0	2.0	.0	8.1	2.8
10	15.0	4.6	8.6	2.7	2.1	.0	4.5	.0	7.3	.1	11.0	3.5
11	15.0	4.9	8.6	2.6	.0	.0	5.6	1.1	7.1	.0	9.4	3.7
12	14.3	4.2	8.5	2.3	.0	.0	4.5	.0	5.3	1.1	8.5	.9
13	14.2	4.1	8.0	2.9	.0	.0	3.7	.0	3.0	.0	4.4	.3
14	15.0	7.2	5.5	2.3	.0	.0	5.8	1.5	.0	.0	4.1	.0
15	13.5	8.2	4.5	.0	2.5	.0	3.8	1.5	.0	.0	6.6	.0
16	11.6	7.3	4.4	.0	2.1	.0	3.7	.0	.0	.0	9.9	.0
17	12.0	3.8	6.0	.7	.0	.0	2.1	.0	.0	.0	8.5	1.2
18	11.2	2.8	5.7	.0	.0	.0	.0	.0	.0	.0	11.3	4.2
19	11.2	1.7	5.9	.0	.0	.0	.0	.0	1.3	.0	12.4	1.6
20	10.7	2.8	6.6	.2	.0	.0	3.7	.0	3.2	.0	11.3	4.0
21	11.5	6.2	6.4	.3	.0	.0	.6	.0	4.2	.0	13.3	5.1
22	12.3	8.1	5.6	.0	.0	.0	.0	.0	5.3	.0	12.4	2.8
23	12.4	4.7	5.5	.0	.0	.0	.0	.0	6.9	.0	12.2	6.8
24	12.9	4.4	5.1	2.8	.0	.0	.0	.0	7.3	.0	13.0	2.6
25	10.9	5.5	5.8	1.8	.0	.0	.0	.0	7.5	1.1	13.2	3.0
26	8.6	5.5	6.2	3.4	.0	.0	.0	.0	7.9	.9	13.4	2.9
27	10.1	2.2	3.2	.2	.0	.0	.0	.0	8.6	1.5	11.7	5.8
28	8.2	4.4	.0	.0	.0	.0	.0	.0	6.9	.4	10.2	5.8
29	6.2	2.0	.0	.0	.0	.0	.0	.0	---	---	7.3	4.9
30	8.0	.2	.0	.0	.0	.0	.0	.0	---	---	8.4	3.9
31	7.1	.9	---	---	.0	.0	.0	.0	---	---	13.9	1.5
MONTH	17.1	.2	9.5	.0	5.2	.0	5.8	.0	8.6	.0	13.9	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.1	3.2	16.6	2.0	12.3	5.6	26.5	14.9	23.6	12.7	22.7	12.9
2	14.8	4.2	19.8	5.1	20.6	3.5	27.5	16.5	24.9	12.5	24.4	13.7
3	14.6	4.1	17.1	3.5	22.8	7.8	22.5	17.2	26.3	11.7	25.4	13.1
4	11.1	4.4	16.9	3.8	22.0	9.5	25.6	15.1	24.8	11.9	28.0	14.0
5	16.1	4.6	21.0	4.3	24.6	9.3	26.2	14.6	24.5	11.8	22.2	15.4
6	16.8	2.6	22.2	5.2	23.5	10.8	25.3	14.5	24.4	11.3	23.7	13.4
7	13.9	3.2	18.5	7.4	24.5	10.0	20.6	16.2	26.3	11.4	25.5	13.0
8	11.5	6.1	13.4	5.1	24.0	9.9	19.8	14.5	26.6	12.4	23.1	13.0
9	9.4	4.7	19.0	1.1	21.9	11.0	22.4	14.6	27.5	12.7	23.9	12.7
10	17.6	2.2	19.5	3.2	22.5	13.5	26.6	14.5	23.1	14.1	24.4	12.9
11	16.5	4.0	11.9	7.1	19.2	12.4	26.0	14.5	24.9	13.8	24.3	11.6
12	15.9	5.6	16.6	5.6	14.9	11.0	26.0	13.5	26.0	15.4	24.6	11.5
13	16.0	6.0	21.3	6.5	22.6	10.0	24.2	14.0	23.5	12.2	24.8	11.7
14	17.4	4.2	21.1	6.9	21.0	10.7	25.2	14.0	26.0	12.1	24.8	10.9
15	17.4	5.5	12.2	7.9	21.0	9.9	25.0	13.5	20.5	14.4	25.0	11.0
16	18.8	6.4	21.1	4.5	20.1	11.6	22.8	13.9	21.7	13.7	23.2	7.6
17	14.9	6.9	21.0	5.0	22.6	9.3	27.0	13.4	20.7	15.5	16.4	7.2
18	17.6	6.0	19.9	5.7	22.0	10.1	21.1	14.5	19.5	13.1	13.2	6.9
19	20.1	7.1	19.2	5.5	21.2	9.7	26.0	13.0	21.0	13.0	15.9	9.0
20	14.9	6.6	21.9	6.6	24.1	9.2	25.5	14.9	18.6	12.5	13.6	7.7
21	16.4	6.1	21.1	6.6	23.9	11.0	25.7	14.4	22.9	12.9	18.2	8.2
22	18.3	5.8	21.3	8.2	25.6	11.1	24.7	12.4	18.0	13.4	18.6	8.6
23	16.7	6.0	21.9	8.7	25.0	11.7	24.2	13.4	18.6	10.5	17.0	8.8
24	14.2	6.8	19.5	9.9	26.3	12.4	24.6	13.9	19.4	11.0	16.5	11.5
25	12.5	7.1	20.5	5.7	25.3	13.7	25.6	13.9	20.4	10.4	17.3	9.4
26	17.4	5.3	17.2	7.1	25.3	13.5	27.5	14.0	20.6	11.2	19.8	9.8
27	13.0	3.7	19.1	8.9	24.8	13.8	26.5	12.1	21.6	10.7	16.3	10.7
28	16.3	4.9	16.9	9.4	25.0	12.6	27.0	12.2	25.1	10.1	15.2	10.0
29	16.5	1.4	18.9	9.7	25.0	12.9	26.1	12.4	25.0	11.3	17.9	8.4
30	14.2	2.0	16.3	8.0	26.3	13.6	26.6	12.3	24.4	11.4	18.4	8.6
31	---	---	20.1	6.3	---	---	23.5	12.2	19.9	12.2	---	---
MONTH	20.1	1.4	22.2	1.1	26.3	3.5	27.5	12.1	27.5	10.1	28.0	6.9
YEAR	28.0	.0										

09306222 PICEANCE CREEK AT WHITE RIVER, CO

LOCATION.--Lat 40°05'16", long 108°14'35", in SW¼NE¼ sec.2, T.1 N., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 900 ft upstream from mouth, 1.0 mi west of White River City, and 17 mi west of Meeker.

DRAINAGE AREA.--652 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to September 1966, October 1970 to current year.

REVISED RECORDS.--WDR CO-82-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,705 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1964, to Sept. 30, 1966, and Oct. 1, 1970, to July 12, 1974, at several sites 1.1 mi upstream at different datums.

REMARKS.--Estimated daily discharges: Nov. 28 to Mar. 7. Records good except for Oct. 1 to June 22, which are poor. Diversions for irrigation of about 5,500 acres upstream from station.

AVERAGE DISCHARGE.--22 years, 39.6 ft³/s; 28,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 628 ft³/s, Sept. 7, 1978, gage height, 7.04 ft, on basis of slope-area measurement of peak flow; minimum daily, 0.50 ft³/s, July 21-22, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 18	1700	*57	*2.85				

Minimum daily, 1.0 ft³/s, July 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	15	20	18	23	25	17	5.8	4.5	3.7	2.0	2.2
2	9.9	13	23	17	15	28	18	7.2	4.5	3.8	1.7	2.2
3	10	15	26	16	21	26	17	6.8	4.3	3.8	1.6	2.1
4	10	20	22	16	22	30	14	6.8	4.1	4.4	1.5	2.0
5	10	24	24	15	16	30	11	6.8	3.9	3.8	1.6	2.1
6	11	24	25	15	23	28	8.5	7.1	4.0	3.8	1.5	2.4
7	11	25	30	15	23	32	8.6	7.6	4.0	4.2	1.5	5.1
8	12	17	26	14	22	25	7.8	6.8	4.1	4.5	1.5	4.0
9	13	25	24	15	22	34	9.0	6.4	2.8	4.5	1.4	3.5
10	13	23	25	16	22	37	7.9	6.7	2.6	4.6	1.5	3.4
11	12	22	26	15	22	36	6.2	5.9	2.9	4.4	1.4	2.9
12	12	21	24	15	24	35	6.0	5.7	3.5	4.4	1.5	3.1
13	13	25	26	15	23	34	5.9	5.4	2.1	4.1	1.5	2.9
14	13	25	24	15	22	32	5.8	5.0	2.3	4.4	1.5	3.0
15	14	16	26	14	22	33	5.8	5.2	3.1	4.3	1.5	3.0
16	16	15	22	14	22	32	5.7	4.8	2.0	4.3	1.4	2.6
17	16	17	22	14	22	34	4.7	5.2	1.9	4.1	1.3	4.3
18	18	17	20	20	21	47	3.9	5.5	1.6	4.4	1.3	36
19	19	18	18	27	21	27	4.3	5.5	1.6	4.1	1.5	24
20	20	18	20	14	23	27	4.2	4.9	1.5	3.8	1.6	10
21	17	18	19	13	22	28	4.4	4.4	1.8	3.6	1.6	7.0
22	17	16	19	17	22	25	4.5	4.8	2.0	3.6	1.6	6.3
23	19	14	18	16	22	27	5.2	4.5	2.2	3.6	1.7	5.8
24	22	22	18	18	23	24	6.5	4.5	2.6	4.3	1.8	6.8
25	22	24	18	14	23	22	6.6	4.8	3.3	1.6	1.8	6.3
26	22	25	16	16	23	21	6.7	4.7	2.3	1.3	1.9	6.5
27	21	18	16	19	23	23	6.1	4.2	2.9	1.3	1.9	7.1
28	16	21	16	16	23	22	5.2	4.0	3.0	1.5	2.3	7.7
29	16	25	18	17	---	22	6.3	4.6	3.6	1.2	2.3	8.1
30	16	20	19	19	---	20	6.2	5.5	3.9	1.0	2.3	8.5
31	16	---	19	21	---	20	---	4.7	---	2.0	2.3	---
TOTAL	466.6	598	669	506	612	886	229.0	171.8	88.9	108.4	51.8	190.9
MEAN	15.1	19.9	21.6	16.3	21.9	28.6	7.63	5.54	2.96	3.50	1.67	6.36
MAX	22	25	30	27	24	47	18	7.6	4.5	4.6	2.3	36
MIN	9.7	13	16	13	15	20	3.9	4.0	1.5	1.0	1.3	2.0
AC-FT	926	1190	1330	1000	1210	1760	454	341	176	215	103	379

CAL YR 1989 TOTAL 7817.1 MEAN 21.4 MAX 140 MIN 1.6 AC-FT 15510
WTR YR 1990 TOTAL 4578.4 MEAN 12.5 MAX 47 MIN 1.0 AC-FT 9080

09306222 PICEANCE CREEK AT WHITE RIVER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1970 to July 1986, March 1987, March 1990 to September 1990.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1971 to June 1974, May 1975 to September 1983.

WATER TEMPERATURES: January 1971 to September 1974, May 1975 to September 1983.

SUSPENDED-SEDIMENT DISCHARGE: March 1974 to September 1983.

INSTRUMENTATION.--Water-quality monitor May 1975 to September 1983. Pumping sediment sampler March 1974 to September 1983.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office. The maximum extreme specific conductance value of 10,000 microsiemens represents a value of 10,000 microsiemens or higher due to instrument limitations.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 10,000 microsiemens June 18, 1981; minimum, 460 microsiemens Feb. 28 and Mar. 2, 1983.

WATER TEMPERATURES: Maximum, 32.0°C July 14, 1978; minimum, 0.0°C many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 25,000 mg/L estimated Sept. 7, 1978; 4 mg/L Oct. 2, 1977.

SEDIMENT LOADS: Maximum daily, 6,095 tons estimated May 28, 1983; minimum daily, 0.10 ton June 22, 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAR 19...	1300	31	2000	8.6	10.0	9.2	550	75	86	290
AUG 01...	0930	2.2	4380	8.8	15.0	8.4	530	30	110	940

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
MAR 19...	5	2.7	630	430	31	0.6	16	1320	1.79
AUG 01...	18	6.0	1660	600	170	2.1	4.6	2860	3.89

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
MAR 19...	109	0.02	0.70	0.09	0.40	0.05	0.06	240	3100
AUG 01...	17.0	<0.01	<0.1	0.01	0.80	0.09	0.07	750	2300

09306222 PICEANCE CREEK AT WHITE RIVER, CO--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)
MAR 19...	1300	31	745	62	AUG 01...	0930	2.2	217	1.3
					01...	0931	2.2	238	1.4

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 27...	1254	22	2100	6.5	APR 12...	1219	6.6	3190	14.0
NOV 14...	1416	26	2050	5.5	MAY 01...	1522	6.0	3320	16.0
DEC 07...	1559	35	2310	0.5	JUN 22...	1109	2.0	4840	--
JAN 19...	1135	27	3250	0.5	JUL 11...	0849	4.5	4260	7.5
MAR 07...	1249	32	2120	2.5	SEP 05...	1115	2.0	4630	23.0

09306242 CORRAL GULCH NEAR RANGELY, CO

LOCATION.--Lat 39°55'13", long 108°28'20", in SE¼NW¼ sec.35, T.1 S., R.99 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 5 ft downstream from Boxelder Creek, and 3.5 mi upstream from confluence with Stake Springs Draw, and 21 mi southeast of Rangely.

DRAINAGE AREA.--31.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1974 to current year.

GAGE.--Water-stage recorder. Concrete control since July 20, 1974. Elevation of gage is 6,570 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 22 to Dec. 20. Records fair except for estimated daily discharges, which are poor. No diversions upstream from station.

AVERAGE DISCHARGE.--16 years, 2.51 ft³/s; 1,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780 ft³/s, Aug. 18, 1984, gage height, 6.12 ft, from rating curve extended above 70 ft³/s, on basis of slope-area measurements at gage heights 3.89 ft, 4.08 ft, and 6.12 ft; minimum daily, 0.06 ft³/s, Apr. 10-14, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 99 ft³/s at 1600 Sept. 4, gage height, 3.32 ft, from high-water mark; minimum daily, 0.29 ft³/s, Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.59	.58	.54	.56	.56	.59	.56	.50	.43	.31	.32	.35
2	.60	.57	.51	.53	.56	.59	.56	.47	.43	.31	.32	.36
3	.61	.60	.54	.54	.56	.60	.56	.47	.43	.41	.31	.36
4	.65	.61	.55	.51	.56	.70	.56	.47	.43	.41	.31	1.5
5	.64	.60	.56	.54	.55	.68	.55	.47	.43	.36	.31	.37
6	.62	.59	.56	.55	.56	.64	.53	.47	.43	.36	.32	.35
7	.63	.58	.55	.56	.56	.62	.54	.47	.40	.40	.31	.34
8	.64	.58	.53	.56	.56	.62	.57	.47	.38	.39	.30	.33
9	.64	.60	.54	.56	.56	.63	.62	.47	.37	.36	.30	.33
10	.64	.58	.51	.55	.56	.64	.62	.47	.37	.34	.31	.31
11	.64	.58	.54	.56	.56	.61	.61	.48	.39	.33	.32	.30
12	.62	.58	.55	.56	.56	.56	.59	.49	.39	.34	.32	.30
13	.63	.58	.56	.56	.56	.56	.56	.47	.37	.34	.32	.30
14	.63	.55	.55	.56	.56	.56	.53	.45	.37	.33	.32	.29
15	.65	.49	.53	.58	.56	.56	.53	.47	.36	.32	1.1	.30
16	.63	.53	.54	.56	.56	.56	.53	.47	.36	.32	.39	.31
17	.61	.54	.51	.56	.56	.56	.53	.47	.35	.32	.35	.31
18	.60	.52	.54	.56	.57	.56	.53	.47	.33	.39	.33	.31
19	.59	.51	.55	.56	.57	.56	.53	.47	.34	.34	.32	.30
20	.61	.51	.54	.56	.57	.56	.53	.47	.35	.33	.32	.30
21	.62	.56	.54	.56	.57	.56	.53	.47	.34	.32	.32	.30
22	.64	.55	.56	.56	.57	.56	.53	.47	.33	.32	.32	.30
23	.62	.53	.56	.56	.57	.56	.53	.47	.33	.33	.32	.30
24	.62	.54	.56	.56	.58	.56	.53	.47	.33	.33	.32	.30
25	.63	.52	.56	.55	.57	.56	.53	.45	.32	.33	.32	.30
26	.64	.51	.57	.53	.58	.56	.53	.45	.32	.33	.32	.30
27	.61	.51	.58	.53	.59	.56	.53	.45	.31	.33	.32	.32
28	.63	.53	.57	.53	.59	.56	.53	.45	.31	.32	.32	.30
29	.59	.55	.57	.53	---	.56	.53	.43	.31	.32	.32	.30
30	.58	.53	.58	.54	---	.56	.53	.43	.31	.32	.34	.30
31	.60	---	.56	.56	---	.56	---	.43	---	.32	.34	---
TOTAL	19.25	16.61	17.01	17.09	15.84	18.12	16.44	14.41	10.92	10.58	10.76	10.64
MEAN	.62	.55	.55	.55	.57	.58	.55	.46	.36	.34	.35	.35
MAX	.65	.61	.58	.58	.59	.70	.62	.50	.43	.41	1.1	1.5
MIN	.58	.49	.51	.51	.55	.56	.53	.43	.31	.31	.30	.29
AC-FT	38	33	34	34	31	36	33	29	22	21	21	21

CAL YR 1989 TOTAL 235.98 MEAN .65 MAX 1.7 MIN .47 AC-FT 468

WTR YR 1990 TOTAL 177.67 MEAN .49 MAX 1.5 MIN .29 AC-FT 352

09306242 CORRAL GULCH NEAR RANGELY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1975 to September 1989.

WATER TEMPERATURE: January 1975 to September 1989.

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1985.

INSTRUMENTATION.--Water-quality monitor October 1974 to August 1989. Pumping sediment sampler October 1974 to September 1985.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 3,000 microsiemens July 17, 1976; minimum, 271 microsiemens Feb. 18, 1980.

WATER TEMPERATURES: Maximum, 29.0°C Aug. 5, 1979; minimum, 0.0°C on several days during winter months some years.

SEDIMENT CONCENTRATIONS: Maximum daily, 35,800 mg/L Aug. 2, 1982; minimum daily, 2 mg/L May 24, 1981.

SEDIMENT LOADS: Maximum daily, 43,600 tons August 18, 1984; minimum daily, 0.00 ton on many days during 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 20...	0940	0.59	1580	8.0	4.0	8.9	630	110	85	140
APR 04...	1150	0.49	1590	7.9	10.0	6.6	620	110	84	140
AUG 01...	1215	0.33	1580	8.2	17.0	9.5	600	100	84	140

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 20...	2	0.9	458	470	16	0.4	21	1120	1.53
APR 04...	2	1.3	434	410	15	0.2	22	1050	1.43
AUG 01...	2	1.4	423	410	19	0.3	19	1030	1.40

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
DEC 20...	1.79	<0.01	0.55	0.02	0.30	0.02	0.02	140	2800
APR 04...	1.39	<0.01	0.50	0.01	0.30	0.02	0.02	140	2900
AUG 01...	0.92	<0.01	<0.1	0.02	0.30	0.02	<0.01	140	2800

09306242 CORRAL GULCH NEAR RANGELY, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
NOV 14...	1145	0.78	1520	6.5	JUN 07...	1355	0.40	1600	16.5
FEB 06...	1335	0.55	1530	4.5	JUL 09...	1315	0.39	1620	16.0
MAR 08...	1245	0.59	1560	10.0	SEP 05...	1335	0.33	1620	18.0
MAY 10...	1245	0.45	1560	10.0					

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR 04...	1150	0.49	58	0.08
04...	1151	0.49	95	0.13
AUG 01...	1215	0.33	106	0.09
01...	1216	0.33	89	0.08

09306255 YELLOW CREEK NEAR WHITE RIVER, CO

LOCATION.--Lat 40°10'07", long 108°24'02", in NE¼SW¼ sec.4, T.2 N., R.98 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 160 ft downstream from bridge on State Highway 64, 0.3 mi upstream from mouth, and 10.0 mi northwest of White River City.

DRAINAGE AREA.--262 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to September 1982, May 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,535 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 28 to Dec. 9, Dec. 11, 12, 17, 18, 27-31, Jan. 1, 2, 4-8, 18-30, Feb. 3-7, 9, 15-18. Records fair except for estimated daily discharges and flows above 10 ft³/s, which are poor. Diversions upstream from station for irrigation of about 300 acres.

AVERAGE DISCHARGE.--12 years (water years 1973-82, 1990), 2.27 ft³/s; 1,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,800 ft³/s, Sept. 7, 1978, gage height, 12.97 ft, on basis of contracted opening and flow over road measurement of peak flow; no flow, Sept. 7-16, 1978, Dec. 15, 1978 to Jan. 14, 1979.

EXTREMES FOR CURRENT YEAR (MAY TO SEPTEMBER).--Peak discharges greater than base discharge of 100 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 4	1800	*50	*6.22				
Minimum daily, 1.5 ft ³ /s, Aug. 26-29.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.5	4.5	4.8	5.5	4.8	3.3	4.3	3.6	2.2	2.0	1.7
2	3.1	4.5	4.4	4.4	5.5	4.7	3.4	4.2	3.6	2.2	2.1	1.8
3	2.7	4.9	4.3	4.4	5.0	4.9	3.4	4.1	3.3	2.3	1.9	1.8
4	2.8	4.2	4.5	4.0	5.2	5.3	3.6	4.1	3.2	6.9	1.9	1.8
5	2.6	4.0	4.6	4.6	5.3	5.6	3.5	4.0	3.2	3.7	1.9	1.9
6	2.6	4.0	4.7	4.7	5.5	5.3	3.4	4.1	3.1	3.1	1.9	1.9
7	2.6	3.7	4.8	4.5	5.4	4.9	3.5	3.9	3.1	3.6	1.9	1.8
8	2.5	3.8	4.9	4.4	5.7	5.0	3.8	3.9	3.0	3.5	1.8	1.8
9	2.5	3.6	4.4	5.5	5.6	4.9	4.0	3.8	3.0	3.2	1.8	1.8
10	2.5	3.5	3.5	4.5	5.3	4.7	3.6	3.9	3.1	3.1	1.8	1.8
11	2.4	3.4	4.0	4.5	5.2	4.9	3.5	4.2	3.2	2.9	1.8	1.8
12	2.4	3.4	4.0	4.4	5.0	4.5	3.6	4.2	3.6	2.8	1.9	1.8
13	2.5	3.4	3.1	4.4	4.6	4.6	3.6	4.1	3.3	2.9	1.8	1.8
14	2.5	3.7	4.6	4.5	4.7	4.8	3.7	4.0	3.1	2.8	1.8	1.7
15	2.6	4.1	4.8	4.6	5.5	5.0	3.7	4.1	2.9	2.7	1.9	1.8
16	2.5	4.9	4.0	4.5	5.0	5.2	3.8	4.1	2.9	2.5	2.1	1.9
17	2.4	4.5	4.8	4.7	5.2	4.9	3.8	3.8	2.9	2.5	2.1	2.2
18	2.4	4.1	4.7	4.7	5.4	4.8	4.0	3.6	2.6	2.7	2.1	2.0
19	2.5	4.1	4.4	4.6	4.8	4.4	3.9	3.6	2.7	2.7	1.9	2.0
20	2.5	4.4	5.2	4.9	4.1	4.0	4.0	3.6	2.7	2.5	1.8	2.0
21	2.5	4.5	5.0	4.7	4.6	4.2	3.9	3.6	2.6	2.4	1.8	2.0
22	2.6	4.4	4.7	4.5	4.2	3.4	4.0	3.5	2.5	2.4	1.8	1.9
23	2.5	4.6	3.6	4.7	4.2	3.4	4.1	3.4	2.5	2.4	1.8	1.9
24	2.5	4.1	3.8	4.5	4.3	3.4	4.5	3.4	2.4	2.5	1.7	2.0
25	2.6	4.1	3.7	4.2	4.5	3.2	4.3	3.4	2.4	2.5	1.6	2.0
26	2.5	4.1	3.9	4.8	4.7	3.2	4.2	3.4	2.4	2.4	1.5	2.0
27	2.5	3.6	4.5	4.7	5.0	3.4	4.2	3.4	2.3	2.3	1.5	2.0
28	2.5	4.6	4.7	4.4	5.0	3.4	4.3	3.3	2.3	2.2	1.5	1.9
29	2.4	4.4	4.2	4.9	---	3.4	4.6	3.3	2.2	2.2	1.5	1.8
30	2.9	4.3	4.0	4.8	---	3.3	4.3	3.3	2.2	2.2	1.6	2.1
31	3.3	---	4.1	5.7	---	3.3	---	3.3	---	2.1	1.6	---
TOTAL	80.8	122.4	134.4	143.5	140.0	134.8	115.5	116.9	85.9	86.4	56.1	56.7
MEAN	2.61	4.08	4.34	4.63	5.00	4.35	3.85	3.77	2.86	2.79	1.81	1.89
MAX	3.4	4.9	5.2	5.7	5.7	5.6	4.6	4.3	3.6	6.9	2.1	2.2
MIN	2.4	3.4	3.1	4.0	4.1	3.2	3.3	3.3	2.2	2.1	1.5	1.7
AC-FT	160	243	267	285	278	267	229	232	170	171	111	112

CAL YR 1989 TOTAL 1598.9 MEAN 4.38 MAX 44 MIN 2.4 AC-FT 3170
WTR YR 1990 TOTAL 1273.4 MEAN 3.49 MAX 6.9 MIN 1.5 AC-FT 2530

09306255 YELLOW CREEK NEAR WHITE RIVER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to September 1982, March 1988 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1975 to September 1982.

WATER TEMPERATURE: April 1975 to September 1982.

SUSPENDED-SEDIMENT DISCHARGE: April 1974 to September 1982.

INSTRUMENTATION.--Automatic pumping sediment sampler April 1974 to September 1982. Water-quality monitor April 1975 to September 1982.

REMARKS.--Unpublished maximum and minimum specific conductance data for the period of daily record are available in the district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum 5,790 microsiemens Sept. 17, 1978; minimum, 457 microsiemens July 21, 1979.

WATER TEMPERATURES: Maximum 35.0°C July 25, 1978; minimum, 0.0°C on many days during the winter period.

SEDIMENT CONCENTRATIONS: Maximum daily, 24,000 mg/L Sept. 07, 1978; minimum daily, no flow several days during Sept. 1978, many days during 1979.

SEDIMENT LOADS: Maximum daily, 290,000 tons Sept. 07, 1978; minimum daily, no flow several days during Sept. 1978, many days during 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 12...	0810	3.2	3740	8.6	0.0	11.8	1000	77	200	630
MAR 21...	1150	4.6	3460	8.6	10.0	9.9	980	76	190	540
JUN 13...	1130	3.5	3480	8.7	17.0	12.1	880	54	180	580
AUG 30...	1250	1.5	3570	8.7	20.0	12.4	760	37	160	640

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 12...	9	3.2	992	1200	86	1.3	16	2820	3.83
MAR 21...	8	3.4	863	1000	71	0.7	17	2430	3.30
JUN 13...	9	2.9	925	1000	80	0.4	14	2470	3.36
AUG 30...	10	3.2	1120	950	96	1.4	12	2590	3.52

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
DEC 12...	24.4	<0.01	1.20	0.04	0.90	0.06	<0.01	580	5500
MAR 21...	30.2	0.02	1.90	0.08	0.40	0.06	0.05	480	5300
JUN 13...	23.4	--	--	--	--	--	--	540	4800
AUG 30...	10.5	0.02	2.30	<0.01	0.80	0.01	<0.01	560	4600

09306255 YELLOW CREEK NEAR WHITE RIVER, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					APR				
02...	1155	3.6	3380	14.5	12...	1012	3.8	3080	8.0
NOV					MAY				
03...	1456	6.0	3560	6.0	01...	1130	4.1	3410	10.5
DEC					JUN				
08...	1354	4.9	3180	1.0	22...	1220	2.6	3530	--
JAN					JUL				
08...	--	4.4	3490	0.5	31...	0751	2.1	3800	12.5
FEB					AUG				
06...	1411	5.5	3490	0.5	29...	1326	1.5	3650	21.5
MAR					SEP				
07...	1148	4.9	3570	0.5	26...	1255	2.0	3660	15.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
12...	0805	3.2	679	5.9	--
12...	0810	3.2	876	7.6	--
MAR					
21...	1150	4.6	545	6.8	90
21...	1151	4.6	555	6.9	--
JUN					
13...	1130	3.5	68	0.64	--
13...	1131	3.5	98	0.93	--
AUG					
30...	1250	1.5	3	0.01	--
30...	1251	1.5	14	0.06	--

GREEN RIVER BASIN

09306290 WHITE RIVER BELOW BOISE CREEK, NEAR RANGELY, CO

LOCATION.--Lat 40°10'47", Long 108°33'53", in SW¼SE¼ sec.36, T.3 N., R.100 W., Rio Blanco County, Hydrologic Unit 14050007, on left bank 60 ft downstream from bridge on County Road 73, 0.5 mi below Boise Creek, and 16.4 mi east of Rangely.

DRAINAGE AREA.--2.530 mi².

WATER-DISCHARGE RECORDS .

PERIOD OF RECORD.--August 1982 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,395 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 29 to Mar. 12. Records fair except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 31,500 acres.

AVERAGE DISCHARGE.--8 years, 894 ft³/s; 647,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,440 ft³/s, June 7, 1984, gage height, 8.45 ft; minimum daily, 126 ft³/s, Sept. 7, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,240 ft³/s at 2115 June 12, gage height, 5.42 ft; minimum daily, 129 ft³/s, Aug. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	313	404	320	395	350	403	370	354	1100	335	295	178
2	310	406	290	390	360	375	372	327	1230	463	294	211
3	306	381	300	400	340	370	384	308	1040	584	278	198
4	317	410	315	370	315	395	400	290	921	507	250	185
5	331	422	350	330	310	450	418	303	1230	446	229	200
6	322	416	410	330	320	450	403	290	1560	423	226	262
7	322	406	425	325	325	430	402	336	1750	453	265	252
8	329	401	380	335	335	405	399	388	1890	542	242	250
9	353	385	400	385	325	440	451	412	1790	545	219	235
10	357	400	415	415	320	410	466	330	1660	526	200	194
11	341	397	410	425	325	410	400	302	1700	443	167	196
12	334	400	390	420	330	426	396	395	1900	364	142	195
13	333	393	380	400	340	407	395	378	1880	335	159	192
14	327	386	405	390	335	369	393	345	1560	292	154	185
15	354	384	430	385	310	363	403	325	1400	285	129	187
16	374	364	440	370	285	378	471	457	1230	290	156	188
17	396	372	435	380	280	371	533	466	1080	300	195	264
18	379	402	430	391	300	368	553	382	962	306	207	301
19	363	379	410	340	310	379	528	369	798	427	198	268
20	357	388	395	330	325	371	489	366	736	431	182	258
21	376	394	425	330	335	384	462	413	687	395	188	253
22	410	388	450	310	355	400	484	456	581	383	190	247
23	405	376	440	305	345	400	491	630	535	361	192	249
24	427	380	420	310	330	413	520	862	495	390	218	246
25	406	419	405	300	330	395	493	1100	458	380	204	251
26	409	429	380	295	350	387	472	1130	435	396	191	260
27	427	447	365	320	380	390	491	1150	419	374	184	292
28	407	399	380	310	415	388	373	1110	391	355	187	304
29	425	315	400	300	---	396	385	1190	354	336	190	308
30	376	290	420	315	---	393	396	1260	337	325	175	301
31	396	---	400	330	---	382	---	1110	---	303	151	---
TOTAL	11282	11733	12215	10931	9280	12298	13193	17534	32109	12295	6257	7110
MEAN	364	391	394	353	331	397	440	566	1070	397	202	237
MAX	427	447	450	425	415	450	553	1260	1900	584	295	308
MIN	306	290	290	295	280	363	370	290	337	285	129	178
AC-FT	22380	23270	24230	21680	18410	24390	26170	34780	63690	24390	12410	14100
CAL YR 1989	TOTAL 191298		MEAN 524	MAX 1480	MIN 126	AC-FT 379400						
WTR YR 1990	TOTAL 156237		MEAN 428	MAX 1900	MIN 129	AC-FT 309900						

09306290 WHITE RIVER BELOW BOISE CREEK NEAR RANGELY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 30...	1500	351	750	8.6	4.0	11.6	290	71	28	49
MAR 21...	0940	383	848	8.6	8.0	9.8	320	74	32	66
MAY 25...	1230	1040	441	8.3	14.0	8.1	200	54	16	18
AUG 30...	1045	178	841	8.5	17.0	8.6	340	78	36	57

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 30...	1	1.5	184	200	13	0.2	14	488	0.66	463
MAR 21...	2	1.8	200	220	13	0.2	13	538	0.73	556
MAY 25...	0.6	1.3	140	86	7.6	0.2	13	282	0.38	791
AUG 30...	1	2.2	200	240	18	0.7	14	566	0.77	272

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS HYDRO, + ORTHO DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 30...	<0.01	<0.1	<0.01	0.60	<0.01	<0.01	<0.01	60	12	2.1
MAR 21...	<0.01	<0.1	0.01	0.30	<0.01	<0.01	0.03	60	4	2.8
MAY 25...	<0.01	0.20	0.07	0.60	0.03	0.02	0.03	20	69	4.2
AUG 30...	0.01	<0.1	0.01	0.40	0.02	<0.01	0.02	70	<3	4.2

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)
OCT 30...	<0.1	0.03	0.27	0.30	<0.01	<0.01	270	10	<1	<1	<1
MAY 25...	0.10	0.06	1.1	1.2	0.63	0.03	4100	60	1	2	1

09306290 WHITE RIVER BELOW BOISE CREEK NEAR RANGELY, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 30...	<100	29	<10	<0.5	<1	<1	2	<1	1	<1	3
MAY 25...	<100	33	<10	<0.5	<1	<1	7	1	3	1	33

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
OCT 30...	<1	1	<1	20	40	7	<0.1	<0.1	2	2
MAY 25...	1	7	<1	10	260	9	<0.1	<0.1	2	1

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)
OCT 30...	3	1	2	2	<1	890	10	7	2.1	<0.01
MAY 25...	13	1	<1	1	<1	460	50	7	11	<0.01

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 02...	0845	300	872	11.0	JUN 08...	1340	1740	372	13.0
DEC 08...	1057	354	754	0.5	JUL 26...	1200	361	685	22.0
MAR 12...	1135	473	977	5.0	AUG 09...	1426	217	706	20.0
APR 20...	1030	474	463	14.0	SEP 26...	1037	261	853	13.0
MAY 22...	1054	413	661	15.0					
MAY 30...	1342	1230	449	14.0					

09306290 WHITE RIVER BELOW BOISE CREEK NEAR RANGELY, CO--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
02...	0845	300	24	19	70
30...	1500	351	25	24	62
DEC					
08...	1057	354	151	144	51
MAR					
12...	1135	473	411	525	64
21...	0940	383	129	133	59
APR					
20...	1030	474	157	201	85
MAY					
22...	1054	413	75	84	86
25...	1230	1040	477	1340	65
30...	1342	1230	507	1690	56
JUN					
08...	1340	1740	694	3260	51
JUL					
26...	1200	361	257	250	71
AUG					
09...	1426	217	65	38	89
30...	1045	178	59	28	71

09339900 EAST FORK SAN JUAN RIVER ABOVE SAND CREEK, NEAR PAGOSA SPRINGS, CO

LOCATION.--Lat 37°23'23", long 106°50'26", in NE¼ sec.4, T.36 N., R.1 E., Archuleta County, Hydrologic Unit 14080101, on right bank 0.3 mi upstream from Sand Creek, 4.0 mi upstream from West Fork San Juan River, and 13 mi northeast of Pagosa Springs.

DRAINAGE AREA.--64.1 mi².

PERIOD OF RECORD.--October 1956 to current year. Prior to October 1959, published as San Juan River above Sand Creek, near Pagosa Springs.

REVISED RECORDS.--WSP 1713: 1957.

GAGE.--Water-stage recorder. Elevation of gage is 8,900 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 8-23, and Nov. 25 to Mar. 21. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 500 acres of hay meadows upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--34 years, 88.7 ft³/s; 64,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,260 ft³/s, Sept. 14, 1970, gage height, 6.75 ft, from rating curve extended above 460 ft³/s, on basis of slope-area measurement at gage height, 6.13 ft; minimum daily determined, 3.4 ft³/s, Dec. 26, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1885 occurred Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 5	2300	590	4.55	June 11	0300	*620	*4.60

Minimum daily discharge, 3.8 ft³/s, Dec. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	14	8.0	5.5	4.6	9.0	21	97	246	65	33	21
2	17	13	8.0	5.5	4.6	9.0	22	94	222	61	36	21
3	19	14	8.5	5.5	4.6	9.5	23	92	277	59	32	20
4	122	14	9.0	5.5	4.8	10	27	97	368	62	29	24
5	73	14	9.0	5.5	4.8	8.5	27	100	433	66	27	31
6	52	14	7.0	6.0	4.8	8.5	30	121	448	81	27	27
7	46	13	7.0	6.0	4.8	9.0	35	163	422	83	32	33
8	40	12	7.0	6.0	4.8	10	39	182	415	71	26	31
9	38	11	5.0	6.0	5.0	12	40	178	391	72	24	27
10	36	10	3.8	6.0	5.5	13	38	181	444	64	23	27
11	34	10	5.5	6.0	5.5	11	43	175	534	66	23	24
12	32	9.5	5.5	6.5	6.0	9.5	47	151	437	62	24	21
13	30	9.0	5.5	6.5	5.0	8.0	50	160	362	60	42	20
14	29	9.0	5.5	6.0	4.8	8.0	56	193	307	77	36	19
15	29	8.5	5.5	5.5	5.0	8.5	80	194	259	64	37	18
16	31	9.0	6.0	5.5	5.0	9.5	95	181	207	58	45	19
17	29	9.0	6.0	5.5	5.5	10	104	209	182	53	39	34
18	25	9.5	5.5	6.0	5.5	11	91	237	172	53	31	32
19	21	10	5.0	5.0	5.0	13	80	218	181	53	27	57
20	21	10	5.0	4.8	5.0	15	78	206	166	58	29	51
21	21	10	5.0	4.6	5.5	16	105	246	153	51	47	51
22	21	9.0	5.0	4.4	6.0	20	155	307	138	45	48	43
23	19	10	5.5	4.4	6.5	21	150	374	129	42	45	43
24	19	11	5.5	4.4	7.0	21	133	440	122	49	37	38
25	18	10	5.5	4.6	7.5	22	106	371	111	50	33	35
26	20	4.0	5.0	4.6	8.0	23	97	346	104	43	30	32
27	18	4.5	5.0	4.6	8.5	23	95	321	99	37	29	29
28	17	5.5	5.0	4.6	9.0	21	103	374	92	33	27	106
29	16	7.0	5.0	4.8	---	20	105	380	80	32	26	125
30	14	8.0	5.0	4.8	---	19	106	272	70	34	25	200
31	15	---	5.5	4.8	---	19	---	262	---	33	23	---
TOTAL	940	301.5	184.3	165.4	158.6	427.0	2181	6922	7571	1737	992	1259
MEAN	30.3	10.0	5.95	5.34	5.66	13.8	72.7	223	252	56.0	32.0	42.0
MAX	122	14	9.0	6.5	9.0	23	155	440	534	83	48	200
MIN	14	4.0	3.8	4.4	4.6	8.0	21	92	70	32	23	18
AC-FT	1860	598	366	328	315	847	4330	13730	15020	3450	1970	2500

CAL YR 1989 TOTAL 25847.6 MEAN 70.8 MAX 392 MIN 3.8 AC-FT 51270
WTR YR 1990 TOTAL 22838.8 MEAN 62.6 MAX 534 MIN 3.8 AC-FT 45300

09342500 SAN JUAN RIVER AT PAGOSA SPRINGS, CO

LOCATION.--Lat 37°15'58", long 107°00'37", in NE¼SW¼ sec.13, T.35 N., R.2 W., Archuleta County, Hydrologic Unit 14080101, on right bank at former bridge site in Pagosa Springs, 0.2 mi upstream from McCabe Creek, 0.6 mi downstream from bridge on U.S. Highway 160, and 2.0 mi upstream from Mill Creek.

DRAINAGE AREA.--298 mi².

PERIOD OF RECORD.--October 1910 to December 1914, May 1935 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1914(M).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,052.04 ft above National Geodetic Vertical Datum of 1929. Jan 29 to Mar. 6, 1911, nonrecording gage at site 0.5 mi upstream, at different datum. Mar. 7 to Oct. 4, 1911, nonrecording gage at present site, at different datum. Nov. 23, 1911, to Nov. 14, 1914, nonrecording gage at site 300 ft downstream, at different datum.

REMARKS.--Estimated daily discharges: Nov.28-30, Dec. 14-17, 19, 27-31, Jan. 2-9, 22-27, Jan. 29 to Feb. 5, Feb. 8, 16-18. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of large areas upstream from station. Several observations of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--59 years, 378 ft³/s; 273,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s, Oct. 5, 1911, gage height, 17.8 ft, from floodmarks, from velocity-area study; minimum daily, 9.7 ft³/s, Oct. 5-6, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1885, that of Oct. 5, 1911. Flood of June 29, 1927, reached a stage of 13.5 ft, discharge about 16,000 ft³/s, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 23	2300	2,140	4.85	June 11	0330	*2,880	*5.63
June 05	2300	2,610	5.36				

Minimum daily discharge, 12 ft³/s, Nov. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	63	39	26	26	57	135	604	1130	226	109	78
2	49	59	38	24	28	62	141	663	948	204	133	73
3	49	63	34	24	26	60	150	550	1230	193	116	73
4	667	66	36	24	24	63	167	546	1670	183	101	78
5	476	64	42	26	24	69	167	538	1990	198	97	97
6	240	65	45	24	27	56	165	629	2030	404	98	105
7	201	61	37	26	27	56	179	828	1880	441	100	167
8	174	57	30	28	26	57	245	887	1830	327	86	125
9	159	55	35	30	28	66	293	866	1730	348	80	107
10	149	58	35	33	26	81	234	855	2030	293	77	88
11	141	60	24	31	28	97	239	846	2500	282	70	66
12	133	58	15	31	31	72	252	724	1900	277	69	58
13	123	55	15	31	34	62	244	713	1610	221	114	56
14	121	53	20	33	33	53	245	940	1360	373	100	55
15	116	46	22	33	28	55	382	995	1120	293	171	52
16	117	41	24	32	28	56	450	874	884	256	226	46
17	120	46	26	29	30	63	520	952	821	239	203	102
18	106	47	27	27	32	67	485	1080	800	210	166	96
19	99	50	26	29	32	75	514	1020	841	219	136	211
20	97	50	24	30	32	95	490	964	748	251	123	161
21	96	51	23	27	30	102	620	1110	639	212	204	202
22	92	44	23	25	30	132	776	1400	576	173	204	148
23	89	41	24	24	31	156	789	1640	547	168	187	185
24	84	39	24	24	36	155	725	1960	504	186	152	162
25	82	52	25	20	41	168	604	1690	439	231	135	144
26	86	48	24	22	47	169	523	1510	389	185	119	132
27	77	37	23	22	53	172	474	1410	353	158	107	120
28	77	22	23	24	56	155	479	1590	315	139	98	424
29	74	12	23	24	---	144	621	1660	273	129	99	807
30	58	24	23	24	---	127	533	1150	238	119	92	495
31	64	---	23	25	---	121	---	1120	---	112	84	---
TOTAL	4267	1487	852	832	894	2923	11841	32314	33325	7250	3856	4713
MEAN	138	49.6	27.5	26.8	31.9	94.3	395	1042	1111	234	124	157
MAX	667	66	45	33	56	172	789	1960	2500	441	226	807
MIN	49	12	15	20	24	53	135	538	238	112	69	46
AC-FT	8460	2950	1690	1650	1770	5800	23490	64090	66100	14380	7650	9350

CAL YR 1989 TOTAL 114193 MEAN 313 MAX 1640 MIN 12 AC-FT 226500
WTR YR 1990 TOTAL 104554 MEAN 286 MAX 2500 MIN 12 AC-FT 207400

09343300 RIO BLANCO BELOW BLANCO DIVERSION DAM, NEAR PAGOSA SPRINGS, CO

LOCATION.--Lat 37°12'11", long 106°48'45", in NW¼ sec.11, T.34 N., R.1 E., Archuleta County, Hydrologic Unit 14080101, on left bank 250 ft downstream from Blanco Diversion Dam, 1.1 mi downstream from Leche Creek, and 12 mi southeast of Pagosa Springs.

DRAINAGE AREA.--69.1 mi².

PERIOD OF RECORD.--March 1971 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,848.81 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Bureau of Reclamation).

REMARKS.--Estimated daily discharges: Oct. 23 to Dec. 12, Dec. 14, 15, Jan. 3-7, 11, 12, 17-20, 25-31, Feb. 3, 4, 16-19, and Feb. 22-24. Records good except for estimated daily discharges, which are fair. Flows controlled by diversion dam upstream.

AVERAGE DISCHARGE.--19 years, 48.5 ft³/s; 35,140 acre-ft/yr.

COOPERATION.--Records collected by U.S. Bureau of Reclamation, computed by Colorado Division of Water Resources, and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft³/s, June 8, 1985, gage height, 4.75 ft; minimum daily, 5.0 ft³/s, Jan. 5, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 411 ft³/s at 0715 Oct. 4, gage height, 3.81 ft; minimum daily, 5.0 ft³/s, Jan. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	12	6.5	7.8	8.4	13	36	41	32	21	21	21
2	15	14	7.5	8.0	8.9	14	49	43	21	21	21	20
3	15	16	8.0	7.5	8.2	14	53	41	20	21	21	20
4	134	18	8.0	7.0	8.4	15	50	41	37	22	21	20
5	25	18	9.0	5.0	8.3	18	50	41	29	22	21	20
6	25	16	10	6.0	8.0	15	34	41	21	21	21	20
7	25	16	9.0	7.0	8.2	15	22	41	21	21	21	21
8	25	16	8.0	8.3	8.7	15	22	41	22	21	20	20
9	25	14	9.0	8.6	8.1	16	21	41	21	21	20	21
10	25	16	9.0	8.4	8.3	17	20	41	35	21	20	21
11	25	16	9.0	8.0	8.9	18	21	41	59	20	20	20
12	30	16	8.5	8.0	12	17	21	41	21	21	20	20
13	34	16	8.2	7.8	10	15	21	41	21	21	21	21
14	30	14	8.0	8.3	9.0	14	21	40	20	21	21	21
15	28	12	8.0	8.2	8.6	14	21	40	20	20	21	21
16	29	10	9.6	8.0	8.0	14	21	39	21	20	20	21
17	30	12	8.6	7.5	7.0	14	21	39	21	20	20	21
18	28	14	10	7.5	8.0	15	22	39	20	21	20	22
19	27	14	8.6	7.0	8.6	18	21	38	21	21	20	21
20	25	14	8.6	7.0	8.8	28	21	38	21	21	20	22
21	25	16	8.6	7.6	9.0	34	21	38	21	21	20	21
22	25	16	8.4	8.6	8.6	54	22	38	21	21	24	21
23	25	12	9.0	8.4	10	61	22	40	20	21	20	22
24	25	12	8.8	7.9	12	58	21	41	21	21	20	22
25	24	14	8.6	7.0	19	68	21	41	21	21	20	23
26	24	12	8.6	7.0	17	69	21	42	20	21	20	22
27	22	10	9.6	8.0	18	62	22	42	21	21	20	22
28	22	8.0	9.6	7.0	14	50	22	42	20	21	20	44
29	20	6.0	8.0	7.0	---	41	22	41	20	21	20	27
30	16	6.0	7.2	7.5	---	35	30	41	21	21	21	22
31	10	---	6.6	8.0	---	33	---	41	---	21	21	---
TOTAL	853	406.0	264.1	234.9	280.0	884	792	1255	710	649	636	660
MEAN	27.5	13.5	8.52	7.58	10.0	28.5	26.4	40.5	23.7	20.9	20.5	22.0
MAX	134	18	10	8.6	19	69	53	43	59	22	24	44
MIN	10	6.0	6.5	5.0	7.0	13	20	38	20	20	20	20
AC-FT	1690	805	524	466	555	1750	1570	2490	1410	1290	1260	1310

CAL YR 1989 TOTAL 15886.3 MEAN 43.5 MAX 316 MIN 6.0 AC-FT 31510
WTR YR 1990 TOTAL 7624.0 MEAN 20.9 MAX 134 MIN 5.0 AC-FT 15120

09344000 NAVAJO RIVER AT BANDED PEAK RANCH, NEAR CHROMO, CO

LOCATION.--Lat 37°05'07", long 106°41'20", in NW¼ sec.24, T.33 N., R.2 E., Archuleta County, Hydrologic Unit 14080101, on left bank at downstream side of private bridge on Banded Peak Ranch, 0.5 mi downstream from Aspen Creek, 4.0 mi downstream from East Fork, and 9 mi northeast of Chromo.

DRAINAGE AREA.--69.8 mi².

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 7,940.6 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 1, 1949, at datum 3.00 ft. higher.

REMARKS.--Estimated daily discharges: Oct. 30 to Nov. 3, Nov. 15-19, Nov. 28 to Dec. 4, Dec. 8, 9, Dec. 11 to Mar. 16, and Apr. 14 to May 21. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 430 acres upstream from station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--54 years, 109 ft³/s; 79,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft³/s, June 9, 1980, gage height, 4.55 ft, from rating curve extended above 840 ft³/s, on basis of float-area measurement at gage height 4.44 ft; maximum gage height, 7.02 ft, May 13, 1941, present datum; minimum daily discharge, 8.4 ft³/s, Sept. 29, 1960, result of temporary blockage by channel alteration upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 10	1600	*866	*3.01	No other peak greater than base discharge.			
Minimum daily discharge, 12 ft ³ /s, Jan. 5.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	26	20	18	22	28	46	140	276	71	68	32
2	29	28	22	18	24	28	49	130	228	61	68	30
3	30	30	22	16	18	29	50	130	314	61	62	29
4	233	32	24	14	18	29	52	140	461	62	54	30
5	112	32	25	12	20	30	52	140	530	61	53	41
6	76	31	25	14	22	30	53	160	510	74	54	61
7	65	30	24	16	22	29	57	210	480	71	49	67
8	60	30	22	18	22	29	67	230	475	71	47	73
9	55	29	24	22	22	30	68	230	433	85	44	62
10	53	30	25	22	22	30	64	230	674	93	44	53
11	52	30	24	22	23	30	71	220	674	95	43	50
12	49	29	20	22	22	27	73	200	438	93	43	47
13	47	29	18	22	22	28	70	220	350	104	58	44
14	43	28	18	22	24	26	80	250	279	131	57	42
15	44	26	14	20	22	26	100	240	211	116	61	42
16	46	22	16	20	16	26	120	230	186	108	95	42
17	44	24	16	18	14	26	120	250	168	102	78	64
18	43	26	22	18	18	29	110	280	161	98	64	76
19	42	28	20	14	20	30	110	260	171	93	57	103
20	42	29	20	14	24	33	110	240	151	95	60	101
21	42	29	20	16	24	36	140	290	131	82	67	86
22	42	28	20	18	24	43	180	362	120	74	105	83
23	41	27	20	18	24	49	160	415	112	76	74	89
24	40	27	20	18	24	49	140	465	106	108	62	79
25	40	28	20	16	26	54	130	438	95	108	55	71
26	40	28	20	16	27	57	120	388	89	84	52	65
27	39	26	20	18	29	57	110	384	84	71	47	64
28	38	20	20	16	28	52	120	446	81	62	46	159
29	36	18	22	16	---	48	150	460	78	61	44	178
30	30	18	22	18	---	44	140	283	74	70	38	135
31	24	---	16	22	---	44	---	279	---	70	33	---
TOTAL	1609	818	641	554	623	1106	2912	8340	8140	2611	1782	2098
MEAN	51.9	27.3	20.7	17.9	22.2	35.7	97.1	269	271	84.2	57.5	69.9
MAX	233	32	25	22	29	57	180	465	674	131	105	178
MIN	24	18	14	12	14	26	46	130	74	61	33	29
AC-FT	3190	1620	1270	1100	1240	2190	5780	16540	16150	5180	3530	4160

CAL YR 1989 TOTAL 31438 MEAN 86.1 MAX 354 MIN 14 AC-FT 62360
WTR YR 1990 TOTAL 31234 MEAN 85.6 MAX 674 MIN 12 AC-FT 61950

LOCATION.--Lat 37°01'48", long 106°44'16", in NE¼ sec.9, T.32 N., R.2 E., Archuleta County, Hydrologic Unit 14080101, on left bank 600 ft downstream from Oso Diversion Dam, 5.5 mi east of Chromo, and 6 mi upstream from Little Navajo River.

PERIOD OF RECORD.--March 1971 to current year.

REMARKS.--Estimated daily discharges: Nov. 27 to Dec. 1, Dec. 12-15, 17, 31, Jan. 3-8, 17-30, Feb. 3-21, and Mar. 22-29. Records good except for estimated daily discharges, which are fair. Flows controlled by diversion dam upstream.

COOPERATION.--Records collected by U.S. Bureau of Reclamation, computed by Colorado Division of Water Resources, and reviewed by Geological Survey.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 853 ft³/s at 1415 June 10, gage height, 4.44 ft; minimum daily, 14 ft³/s, Jan. 5.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	27	20	21	26	28	40	86	73	53	58	29
2	32	28	22	21	27	29	37	88	56	53	56	30
3	30	29	23	18	20	28	37	88	56	53	56	30
4	73	31	23	16	20	30	38	88	59	53	56	32
5	56	31	24	14	22	32	39	88	69	55	55	36
6	56	30	25	16	24	30	40	88	59	57	55	58
7	55	30	24	18	24	30	45	88	56	56	56	72
8	55	29	23	20	24	29	47	88	56	56	48	77
9	48	28	24	24	24	30	41	89	56	56	53	72
10	44	29	24	23	24	31	40	98	339	56	30	61
11	44	30	24	22	24	33	39	87	110	56	43	58
12	45	29	20	22	24	30	39	87	62	56	43	40
13	46	40	17	22	26	30	39	88	63	56	71	49
14	45	32	18	23	28	28	39	87	62	56	57	48
15	45	26	16	22	26	28	39	87	62	57	71	44
16	42	23	19	22	18	27	39	88	63	56	67	43
17	44	24	18	20	16	28	39	88	62	56	55	53
18	43	26	24	20	20	30	39	87	62	73	55	71
19	42	26	22	16	22	31	37	87	61	57	56	145
20	41	27	22	16	24	36	37	87	60	57	52	71
21	41	30	22	20	26	38	36	88	57	55	66	56
22	41	30	22	20	26	42	37	89	56	55	55	56
23	41	25	22	20	26	45	37	90	56	55	55	56
24	41	26	23	20	27	44	37	90	56	55	56	55
25	40	26	22	18	28	50	37	90	54	53	58	55
26	40	27	22	18	28	52	37	90	51	55	58	56
27	39	26	22	20	29	50	36	91	52	57	59	56
28	39	21	23	18	29	40	36	90	52	57	48	56
29	37	18	23	18	---	45	36	90	53	57	50	56
30	32	18	24	20	---	48	44	90	53	58	47	56
31	26	---	18	26	---	46	---	90	---	59	34	---
TOTAL	1337	822	675	614	682	1098	1163	2750	2086	1744	1679	1677
MEAN	43.1	27.4	21.8	19.8	24.4	35.4	38.8	88.7	69.5	56.3	54.2	55.9
MAX	73	40	25	26	29	52	47	98	339	73	71	145
MIN	26	18	16	14	16	27	36	86	51	53	30	29
AC-FT	2650	1630	1340	1220	1350	2180	2310	5450	4140	3460	3330	3330
CAL YR 1989	TOTAL 19729											
WTR YR 1990	TOTAL 16327											
	MEAN 54.1											
	MAX 217											
	MIN 16											
	AC-FT 39130											
	AC-FT 32380											

09345200 LITTLE NAVAJO RIVER BELOW LITTLE OSO DIVERSION DAM, NEAR CHROMO, CO

LOCATION.--Lat 37°04'32", long 106°48'38", in SW¼ sec.23, T.33 N., R.1 E., Archuleta County, Hydrologic Unit 14080101, on right bank at Little Oso Diversion Dam, 3.5 mi northeast of Chromo, and 4.0 mi upstream from confluence with Navajo River.

DRAINAGE AREA.--14.2 mi².

PERIOD OF RECORD.--June 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7,756.10 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Flows controlled by diversion dam upstream.

AVERAGE DISCHARGE.--19 years, 8.51 ft³/s; 6,170 acre-ft/yr.

COOPERATION.--Records collected and computed by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 235 ft³/s, May 30, 1979; no flow Apr. 14, 1974, and Oct. 21, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 33 ft³/s, May 7; minimum daily, 0.10 ft³/s, Dec. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	.80	.98	.98	1.3	4.1	6.1	23	3.3	4.4	2.2
2	1.2	1.0	.70	.98	1.1	1.3	4.1	12	20	3.1	3.9	2.2
3	1.3	1.0	.50	.98	1.1	1.3	4.6	21	21	3.1	3.9	2.1
4	12	1.2	.50	1.1	1.1	1.6	4.8	23	22	3.2	3.5	2.1
5	6.5	1.3	.60	1.1	.98	1.5	5.1	24	24	3.8	3.3	2.5
6	3.5	1.3	.80	1.1	.98	1.6	5.3	31	23	4.4	3.8	3.1
7	2.9	1.2	.80	1.1	.98	1.4	6.3	33	21	3.8	3.2	4.1
8	2.2	1.0	.70	1.1	.98	1.4	7.4	26	20	3.6	4.4	2.9
9	2.0	1.1	.70	1.1	.98	1.5	6.7	27	19	4.4	2.6	2.5
10	2.0	1.1	.80	1.1	.88	1.6	4.4	26	28	5.3	2.5	2.4
11	1.7	1.1	.60	1.1	.88	1.7	5.3	27	27	7.6	2.5	2.1
12	1.7	1.1	.40	1.1	.88	1.6	4.6	27	20	7.6	2.4	1.9
13	1.7	1.1	.20	.98	.98	1.5	4.8	27	16	4.4	3.6	1.7
14	1.6	.90	.20	1.1	1.1	1.4	5.1	28	15	8.2	4.9	1.6
15	1.6	.50	.10	.98	1.1	1.4	5.6	28	13	6.3	5.6	1.5
16	1.7	.90	.30	.98	1.1	1.4	5.6	28	11	5.8	9.0	1.6
17	1.7	1.0	.50	.98	.98	1.5	4.9	28	9.9	4.6	5.4	4.9
18	1.5	1.0	.60	.98	.98	1.5	4.8	29	8.8	4.9	4.1	3.6
19	1.6	1.1	.60	.98	.98	1.7	4.8	28	8.0	3.1	3.3	8.2
20	1.5	1.1	.50	.98	.88	2.0	5.8	28	7.2	6.7	3.6	5.8
21	1.5	1.2	.40	.98	.88	2.5	4.4	28	6.7	7.1	4.8	5.8
22	1.5	1.0	.20	.98	.88	3.1	5.6	25	6.3	6.5	8.2	3.6
23	1.4	.90	.20	.98	.88	3.9	3.6	28	5.6	4.1	5.6	6.7
24	1.4	1.0	.20	.98	.88	3.9	4.3	29	5.4	8.2	3.9	5.4
25	1.4	1.2	.20	.98	1.1	4.8	3.9	30	4.8	9.4	3.3	4.1
26	1.5	1.0	.20	.98	1.3	4.8	4.1	26	4.6	5.6	2.9	3.5
27	1.3	.80	.20	.98	1.5	4.9	3.8	28	4.4	4.6	2.8	3.2
28	1.2	.20	.50	.98	1.4	4.3	4.3	28	3.9	3.8	3.6	9.7
29	.90	.50	.50	.98	---	3.9	2.6	28	3.6	3.9	3.6	13
30	.70	.90	.50	.98	---	3.6	3.3	26	3.5	4.1	2.9	8.2
31	1.1	---	.60	.98	---	3.5	---	24	---	4.4	2.5	---
TOTAL	65.00	29.90	14.60	31.58	28.74	73.4	144.0	807.1	405.7	158.9	124.0	122.2
MEAN	2.10	1.00	.47	1.02	1.03	2.37	4.80	26.0	13.5	5.13	4.00	4.07
MAX	12	1.3	.80	1.1	1.5	4.9	7.4	33	28	9.4	9.0	13
MIN	.70	.20	.10	.98	.88	1.3	2.6	6.1	3.5	3.1	2.4	1.5
AC-FT	129	59	29	63	57	146	286	1600	805	315	246	242

CAL YR 1989 TOTAL 3437.40 MEAN 9.42 MAX 69 MIN .10 AC-FT 6820
WTR YR 1990 TOTAL 2005.12 MEAN 5.49 MAX 33 MIN .10 AC-FT 3980

09346000 NAVAJO RIVER AT EDITH, CO

LOCATION.--Lat 37°00'10", long 106°54'25", in NW¼NW¼ sec.24, T.32 N., R.1 W., Archuleta County, Hydrologic Unit 14080101, on right bank 290 ft downstream from highway bridge, 0.2 mi southeast of Edith, 0.5 mi upstream from Colorado-New Mexico State line, and 1.3 mi upstream from Coyote Creek.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--Streamflow records, September 1912 to current year. Monthly or yearly discharge only for some periods, published in WSP 1313. Water-quality data available, November 1970 to September 1974. Sediment data available April 1973 to September 1974.

REVISED RECORDS.--WSP 1243: 1943, 1945. WSP 1633: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,033.00 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Bureau of Reclamation). Prior to Jan. 1, 1929, nonrecording gage at site 240 ft upstream, at different datum. June 2, 1935, to June 27, 1941, water-stage recorder at sites 200 and 240 ft upstream, at datum 2.0 ft, higher. June 28, 1941, to June 20, 1961, at site 50 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Nov. 16-19, 21-24, Nov. 27 to Mar. 7, and July 6-12. Records good except those for flows over 250 ft³/s, which are fair, and those for estimated daily discharges, which are poor. Diversions for irrigation of about 1,700 acres upstream from station. Highwater diversions upstream from station into Heron Reservoir through Azotea tunnel began in March 1971. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--58 years (water years 1913-70), 155 ft³/s; 112,300 acre-ft/yr, prior to diversions through Azotea tunnel; 20 years (water years 1971-90), 83.0 ft³/s; 60,130 acre-ft/yr, subsequent to diversion through Azotea tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,840 ft³/s, Apr. 23, 1942, gage height, 6.55 ft, from rating curve extended above 1,100 ft³/s; minimum daily, 8.0 ft³/s, Sept. 25, 1953, Aug. 7, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, exceeded all other observed floods at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 556 ft³/s at 1630 June 10, gage height, 4.26 ft; minimum daily discharge, 13 ft³/s, Nov. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	33	26	19	18	38	57	119	91	50	62	30
2	38	34	26	19	18	40	52	129	64	48	60	26
3	35	34	26	19	18	38	51	126	71	50	61	28
4	87	39	26	19	18	40	53	120	73	52	58	26
5	70	40	30	19	19	42	52	120	72	52	60	35
6	65	40	30	20	20	38	53	123	82	100	60	44
7	63	39	26	20	20	36	58	123	66	120	55	66
8	66	38	22	22	20	36	65	122	66	95	52	70
9	62	38	24	22	20	39	65	115	66	95	57	85
10	54	38	22	24	20	42	57	121	226	85	33	64
11	55	39	17	24	20	50	58	105	163	80	36	61
12	55	39	14	24	22	39	57	93	81	80	38	46
13	55	42	15	24	24	37	55	93	66	77	69	41
14	55	47	17	24	24	33	55	93	65	102	80	42
15	54	35	18	24	22	33	55	91	65	83	77	38
16	53	28	19	22	20	33	56	97	63	72	91	38
17	53	30	20	22	20	34	55	102	61	65	72	44
18	53	32	20	20	22	39	65	91	60	88	70	73
19	52	34	19	22	22	40	81	85	54	65	67	143
20	52	36	18	22	22	46	75	87	52	61	70	88
21	52	34	17	20	22	50	68	86	51	55	85	62
22	51	32	17	18	22	56	67	87	48	52	93	60
23	50	30	18	17	22	84	60	91	47	52	75	63
24	48	30	18	16	24	60	62	93	47	71	70	61
25	47	35	18	16	28	66	61	93	47	63	67	60
26	47	34	18	17	30	66	60	102	47	58	65	60
27	45	22	18	17	34	68	55	105	49	58	70	60
28	42	16	18	17	36	63	52	100	46	61	52	83
29	42	13	18	17	---	60	51	100	47	61	52	91
30	39	22	18	18	---	63	56	98	47	61	52	74
31	31	---	18	18	---	58	---	100	---	70	41	---
TOTAL	1611	1003	631	622	627	1467	1767	3210	2083	2182	1950	1762
MEAN	52.0	33.4	20.4	20.1	22.4	47.3	58.9	104	69.4	70.4	62.9	58.7
MAX	87	47	30	24	36	84	81	129	226	120	93	143
MIN	31	13	14	16	18	33	51	85	46	48	33	26
AC-FT	3200	1990	1250	1230	1240	2910	3500	6370	4130	4330	3870	3490

CAL YR 1989 TOTAL 25173 MEAN 69.0 MAX 314 MIN 13 AC-FT 49930
WTR YR 1990 TOTAL 18915 MEAN 51.8 MAX 226 MIN 13 AC-FT 37520

09346400 SAN JUAN RIVER NEAR CARRACAS, CO

LOCATION.--Lat 37°00'49", long 107°18'42", in SE¼SW¼ sec.17, T.32 N., R.4 W., Archuleta County, Hydrologic Unit 14080101, on right bank just upstream from flow line of Navajo Reservoir, 3 mi northwest of Carracas, 7.2 mi upstream from Piedra River, and at mile 332.8.

DRAINAGE AREA.--1,230 mi², approximately.

PERIOD OF RECORD.--Streamflow records, October 1961 to current year. Water-quality data available, July 1969 to August 1973. Sediment data available, August 1973.

GAGE.--Water-stage recorder and crest stage gage. Elevation of gage is 6,090 ft above National Geodetic Vertical Datum of 1929, from river-profile map.

REMARKS.--Estimated daily discharges: Nov. 19-20, and Nov. 24 to Mar. 6. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 11,000 acres upstream from station. Highwater diversions upstream from station into Rio Grande basin through Azotea tunnel (station 08284160) began in March 1971. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 632 ft³/s; 457,900 acre-ft/yr, prior to completion of Azotea tunnel; 20 years (water years 1971-90), 636 ft³/s; 460,800 acre-ft/yr, since completion of Azotea tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft³/s, Sept. 6, 1970, gage height, 8.34 ft, from rating curve extended above 6,000 ft³/s, on basis of slope-area measurement of peak flow; minimum daily, about 5 ft³/s, Dec. 10, 1961, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911; June 29, 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 6	0600	2,800	4.63	June 11	0600	*3,420	*4.91

Minimum daily discharge, 42 ft³/s, Nov. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	114	75	65	70	150	269	770	1260	395	231	166
2	114	114	90	70	70	150	285	985	1120	373	228	151
3	110	112	90	70	70	160	296	843	1220	363	227	148
4	348	114	90	70	70	150	312	830	1530	360	210	192
5	734	120	90	70	70	160	316	789	1920	358	200	179
6	342	120	100	70	70	170	316	796	2220	476	206	202
7	270	120	110	70	75	157	303	947	2050	637	206	300
8	239	116	95	75	75	151	366	1050	1990	500	203	291
9	221	110	80	80	75	154	497	1070	1900	508	182	258
10	203	108	80	80	75	181	429	1050	2010	535	179	225
11	193	116	85	85	75	227	374	1060	2800	445	160	207
12	186	116	70	85	80	207	375	957	1910	461	151	196
13	179	116	50	85	85	161	370	891	1630	393	169	164
14	175	120	46	85	90	136	360	1050	1400	489	263	151
15	172	114	55	85	95	125	426	1160	1220	574	269	154
16	169	99	65	90	80	118	515	1080	1040	434	407	154
17	169	96	65	90	80	122	571	1120	996	383	428	192
18	166	104	70	80	80	130	731	1230	966	360	328	283
19	154	100	70	80	85	136	932	1220	965	355	274	425
20	151	110	70	80	90	157	832	1140	926	326	382	418
21	151	116	65	80	90	185	840	1200	842	420	414	434
22	151	112	65	80	85	216	869	1440	762	301	451	369
23	147	106	65	70	85	280	919	1610	729	277	423	537
24	145	95	65	65	90	305	832	1960	689	285	314	417
25	143	90	65	65	100	303	840	1880	637	390	270	351
26	140	100	65	60	110	312	758	1720	577	331	242	345
27	140	90	65	60	120	316	654	1490	529	286	228	330
28	130	60	65	65	140	308	613	1640	498	254	217	438
29	130	42	65	65	---	288	698	1790	456	242	198	877
30	120	60	65	70	---	281	692	1430	417	238	196	633
31	112	---	65	70	---	261	---	1290	---	231	186	---
TOTAL	5920	3110	2261	2315	2380	6157	16590	37488	37209	11980	8042	9187
MEAN	191	104	72.9	74.7	85.0	199	553	1209	1240	386	259	306
MAX	734	120	110	90	140	316	932	1960	2800	637	451	877
MIN	110	42	46	60	70	118	269	770	417	231	151	148
AC-FT	11740	6170	4480	4590	4720	12210	32910	74360	73800	23760	15950	18220

CAL YR 1989 TOTAL 176299 MEAN 483 MAX 1760 MIN 42 AC-FT 349700
WTR YR 1990 TOTAL 142639 MEAN 391 MAX 2800 MIN 42 AC-FT 282900

09349800 PIEDRA RIVER NEAR ARBOLES, CO

LOCATION.--Lat 37°05'18", long 107°23'50", in NE¼SW¼ sec.21, T.33 N., R.5 W., Archuleta County, Hydrologic Unit 14080102, on left bank 3 mi downstream from Ignacio Creek, 4.6 mi northeast of Arboles Post Office, and 2.5 mi upstream from Navajo Reservoir.

DRAINAGE AREA.--629 mi².

PERIOD OF RECORD.--Streamflow records, August 1962 to current year. Gage operated 1895-99 and 1910-27 at site 7.5 mi downstream at altitude 6,000 ft. Low-flow records probably not equivalent. Water-quality data available, November 1972 to August 1973, December 1988 to May 1989.

GAGE.--Water-stage recorder. Datum of gage is 6,147.52 ft above National Geodetic Vertical Datum of 1929, Colorado State Highway Department benchmark.

REMARKS.--Estimated daily discharges: Nov. 15-19, 21-24, Nov. 26 to Mar. 6, May 1-9, July 3, Aug. 1, 2, 4-14, Sept. 2-3, and Sept. 12-17. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 2,800 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--28 years, 407 ft³/s; 294,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,370 ft³/s, Sept. 6, 1970, gage height, 6.38 ft, recorded, 7.55 ft, from floodmarks, from rating curve extended above 4,400 ft³/s, on basis of slope-area measurement of peak flow; minimum discharge, 11 ft³/s, Dec. 9, 1963, Oct. 1, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909, and Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 24	0500	1,620	3.07	June 11	0900	*2,180	*3.63
June 6	0500	1,920	3.37				

Minimum daily discharge, 19 ft³/s, Nov. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	67	40	30	30	60	174	800	887	227	150	105
2	69	65	40	30	30	65	167	880	785	203	180	100
3	69	64	38	28	30	65	181	760	909	200	174	100
4	220	65	38	28	30	65	188	700	1250	216	150	115
5	456	67	44	30	30	70	205	700	1530	206	140	156
6	263	67	48	30	30	65	212	720	1660	677	140	187
7	210	65	42	32	30	61	241	800	1520	913	140	167
8	185	62	34	32	30	58	296	920	1510	751	120	154
9	167	59	36	34	30	56	392	950	1430	762	110	151
10	154	60	36	36	30	60	331	924	1650	693	105	136
11	151	65	30	36	32	81	315	908	2030	633	100	123
12	148	61	20	36	36	85	335	799	1690	526	100	95
13	142	60	22	36	38	77	335	770	1380	455	160	85
14	133	59	24	38	38	62	335	889	1190	476	150	80
15	128	55	26	38	34	56	419	962	1020	454	210	75
16	125	46	28	36	32	57	498	870	781	396	344	85
17	125	48	30	34	34	57	559	891	721	360	349	140
18	115	50	30	32	34	59	572	970	672	315	330	139
19	105	50	30	32	36	60	669	941	685	306	276	212
20	101	53	28	34	36	65	712	862	639	288	243	213
21	103	50	26	32	34	79	747	915	562	281	356	249
22	103	48	26	30	34	95	782	1090	495	228	326	220
23	101	44	28	28	36	128	852	1280	454	206	280	234
24	97	42	28	26	40	190	784	1550	427	283	247	261
25	95	49	28	24	44	212	749	1400	401	274	220	224
26	91	46	28	26	50	230	679	1300	376	251	196	206
27	91	38	28	26	55	242	692	1140	346	210	178	188
28	81	28	28	28	60	220	665	1220	311	183	167	247
29	75	19	28	28	---	202	822	1280	280	167	148	761
30	71	30	28	28	---	192	763	1010	247	170	136	610
31	62	---	28	28	---	171	---	849	---	160	125	---
TOTAL	4111	1582	968	966	1003	3245	14671	30050	27838	11470	6050	5818
MEAN	133	52.7	31.2	31.2	35.8	105	489	969	928	370	195	194
MAX	456	67	48	38	60	242	852	1550	2030	913	356	761
MIN	62	19	20	24	30	56	167	700	247	160	100	75
AC-FT	8150	3140	1920	1920	1990	6440	29100	59600	55220	22750	12000	11540
CAL YR 1989	TOTAL 119178	MEAN 327	MAX 1500	MIN 19	AC-FT 236400							
WTR YR 1990	TOTAL 107772	MEAN 295	MAX 2030	MIN 19	AC-FT 213800							

09352900 VALLECITO CREEK NEAR BAYFIELD, CO
(Hydrologic bench-mark station)

LOCATION.--Lat 37°28'39", long 107°32'35", in NE¼NW¼ sec.16, T.37 N., R.6 W., La Plata County, Hydrologic Unit 14080101, on right bank 60 ft upstream from Fall Creek, 0.8 mi downstream from Bear Creek, 6.7 mi north of Vallecito Dam, and 18 mi north of Bayfield.

DRAINAGE AREA.--72.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 7,906.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 16 to Mar. 25, Apr. 22-27, May 17-22. Records good except for estimated daily discharges, which are poor. No diversion upstream from station.

AVERAGE DISCHARGE.--28 years, 147 ft³/s; 106,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft³/s, Sept. 6, 1970, gage height, 5.51 ft, from water-stage recorder, 6.76 ft, from floodmarks, from rating curve extended above 1,400 ft³/s, on basis of slope-area measurement of peak flow; minimum daily, 6.7 ft³/s, Dec. 28, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred in October 1911 and June 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 10	2300	*1,150	*3.00	No other peak greater than base discharge.			
Minimum daily, 7.5 ft ³ /s, Dec. 11.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	40	18	14	13	28	36	117	332	198	72	68
2	49	37	19	14	13	28	37	112	291	188	99	65
3	49	39	18	14	13	28	36	110	484	219	102	61
4	122	40	18	14	13	28	37	122	739	185	82	74
5	105	38	20	14	13	30	39	133	886	180	74	166
6	94	36	22	14	14	28	44	163	885	722	68	150
7	94	35	19	15	14	28	47	195	833	606	61	168
8	90	32	16	15	14	28	51	204	832	411	58	160
9	92	32	16	16	14	30	50	200	816	410	54	144
10	100	32	15	16	14	30	50	200	973	344	53	122
11	102	32	7.5	16	15	34	55	188	963	286	52	110
12	98	31	8.5	16	16	32	63	176	760	233	52	98
13	92	31	10	16	17	30	71	211	658	201	53	88
14	88	29	11	17	17	28	76	239	578	184	69	81
15	86	24	13	17	15	28	95	232	427	160	183	76
16	90	22	14	16	14	28	114	264	334	141	255	72
17	84	22	14	15	15	28	121	310	350	125	217	106
18	77	22	14	15	16	30	113	340	394	117	181	122
19	71	24	14	15	16	30	107	310	398	115	138	156
20	69	24	13	15	16	32	106	300	363	112	122	172
21	66	24	12	14	16	34	128	390	350	107	276	184
22	68	24	12	13	16	34	130	470	332	98	189	157
23	65	22	13	12	16	36	140	617	320	88	154	160
24	62	20	13	12	18	36	140	647	314	111	131	164
25	60	24	13	11	20	36	130	503	278	114	115	150
26	58	22	13	12	22	34	130	467	255	100	102	134
27	53	19	13	12	26	31	130	466	236	90	92	125
28	51	11	13	13	26	30	122	574	236	81	92	201
29	46	8.0	13	13	---	29	133	490	220	76	82	349
30	39	13	13	13	---	31	122	335	216	71	82	315
31	43	---	14	13	---	31	---	317	---	68	74	---
TOTAL	2314	809.0	442.0	442	452	948	2653	9402	15053	6141	3434	4198
MEAN	74.6	27.0	14.3	14.3	16.1	30.6	88.4	303	502	198	111	140
MAX	122	40	22	17	26	36	140	647	973	722	276	349
MIN	39	8.0	7.5	11	13	28	36	110	216	68	52	61
AC-FT	4590	1600	877	877	897	1880	5260	18650	29860	12180	6810	8330

CAL YR 1989 TOTAL 43619.0 MEAN 120 MAX 569 MIN 7.5 AC-FT 86520
WTR YR 1990 TOTAL 46288.0 MEAN 127 MAX 973 MIN 7.5 AC-FT 91810

09352900 VALLECITO CREEK NEAR BAYFIELD, CO--Continued
(Hydrologic Bench-Mark Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1963 to September 1968; October 1969 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1962 to September 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: (Water years 1963-82) Maximum, 20.0°C July 10, 1974; minimum, 0.0°C on many days during winter months each year

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL; KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CAC03)
DEC 11...	1000	2.5	110	7.1	0.0	0.6	11	K3	K7	K1	53
MAR 26...	1000	33	55	7.9	2.0	0.6	10	<1	<1	K2	31
MAY 22...	1400	443	48	7.8	6.0	1.5	9.7	<1	<1	K20	28
JUL 10...	1200	337	73	7.6	9.0	1.0	9.1	--	K7	K7	24

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CAC03	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
DEC 11...	15	3.7	2.4	0.1	0.7	40	33	22	0.6	0.2	4.5
MAR 26...	9.4	1.9	1.5	0.1	0.7	30	25	7.0	0.6	0.1	4.1
MAY 22...	8.6	1.5	1.0	0.1	0.6	22	18	5.0	1.4	0.2	3.0
JUL 10...	7.0	1.5	0.7	0.1	0.4	20	16	7.2	0.6	0.1	2.8

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)
DEC 11...	69	70	0.09	0.47	<0.01	0.22	<0.01	<0.01	<0.2	<0.01	<0.01
MAR 26...	40	41	0.05	3.56	<0.01	0.20	<0.01	<0.01	<0.2	0.02	0.02
MAY 22...	36	33	0.05	43.1	<0.01	0.20	<0.01	0.01	0.9	0.02	0.02
JUL 10...	33	31	0.05	30.0	<0.01	0.20	0.02	0.02	<0.2	0.02	<0.01

K BASED ON NON-IDEAL COLONY COUNT.

09352900 VALLECITO CREEK NEAR BAYFIELD, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC 11...	<0.01	40	<1	16	<0.5	<1	<1	<3	1	5	<1
MAR 26...	<0.01	30	<1	11	<0.5	2	<5	<3	<10	18	<10
MAY 22...	<0.01	80	1	10	0.6	<1	3	<3	2	47	1
JUL 10...	<0.01	70	<1	10	<0.5	<1.0	<1	<3	2	9	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 11...	<4	1	<0.1	<10	4	<1	<1.0	57	<6	3
MAR 26...	<4	2	<0.1	<10	<10	<1	2.0	28	<6	6
MAY 22...	<4	11	0.8	<10	1	<1	<1.0	21	<6	6
JUL 10...	<4	16	<0.1	<10	1	<1	<1.0	19	<6	3

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
DEC 11...	1000	1.1	<0.4	2.5	2.0	1.9	1.9	0.07	0.79

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 11...	1000	2.5	15	0.10	34
MAR 26...	1000	33	3	0.27	37
MAY 22...	1400	443	6	7.2	55
JUL 10...	1200	337	2	1.8	51

09353000 VALLECITO RESERVOIR NEAR BAYFIELD, CO

LOCATION.--Lat 37°23'00", long 107°34'30", in SW¼SW¼ sec.18, T.36 N., R.6 W., La Plata County, Hydrologic Unit 14080101, in gatehouse above outlet gates at Vallecito Dam on Los Pinos (Pine) River, 300 ft left of spillway, 0.4 mi upstream from Jack Creek, and 11 mi northeast of Bayfield.

PERIOD OF RECORD.--April 1941 to current year.

REVISED RECORDS.--WSP 959: 1941. WSP 1513: 1956.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,580 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum.

REMARKS.--Reservoir is formed by earth and rockfill dam; dam completed in March 1941. Capacity of reservoir, 125,640 acre-ft between elevations 7,580 ft, sill of outlet gate, and 7,665 ft, top of spillway gates. Dead storage, 3,395 acre-ft. Figures given are usable contents. Reservoir is used to store water for irrigation in Los Pinos (Pine) River basin and provide hydroelectric power.

COOPERATION.--Records provided by Pine River Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 128,200 acre-ft, July 27, 1957, elevation, 7,665.72 ft; minimum, 1,520 acre-ft, Oct. 24-25, 1944, elevation, 7,584.10 ft. No usable storage prior to April 1941.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 125,150 acre-ft, June 19, elevation, 7,664.82 ft; minimum, 39,350 acre-ft, Oct. 11, elevation, 7,626.73 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 0900, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	7,628.02	41,500	-
Oct. 31.	7,628.74	42,740	+1,240
Nov. 30.	7,629.51	44,080	+1,340
Dec. 31.	7,629.76	44,510	+430
CAL YR 1989	-	-	-32,210
Jan. 31.	7,630.20	45,290	+780
Feb. 28.	7,630.63	46,060	+770
Mar. 31.	7,631.93	48,420	+2,360
Apr. 30.	7,638.97	62,280	+13,860
May 31.	7,653.73	96,270	+33,990
June 30.	7,663.75	122,250	+25,980
July 31.	7,660.06	112,440	-9,810
Aug. 31.	7,652.19	92,470	-19,970
Sept. 30.	7,646.77	79,530	-12,940
WTR YR 1990	-	-	+38,030

09354500 LOS PINOS RIVER AT LA BOCA, CO

LOCATION.--Lat 37°00'34", long 107°35'56", in NE¼NW¼ sec.22, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on downstream end of right abutment of the Denver & Rio Grande Western Railroad Co. bridge, at southeast edge of La Boca, 0.1 mi upstream from Spring Creek, and 2 mi upstream from maximum elevation of Navajo Reservoir.

DRAINAGE AREA.--510 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Streamflow records, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733. Water-quality data available, July 1969 to August 1973.

GAGE.--Water-stage recorder. Datum of gage is 6,143.59 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 29 to March 5. Records good except for estimated daily discharges, which are poor. Flow regulated by Vallecito Reservoir (station 09353000) 24 mi upstream since April 1941. Diversions for irrigation of about 33,000 acres upstream from station.

AVERAGE DISCHARGE.--40 years, 236 ft³/s; 171,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft³/s, July 27, 1957, gage height, 8.95 ft, from rating curve extended above 5,100 ft³/s; minimum daily, 6.1 ft³/s, May 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood on Oct. 5, 1911 has not yet been exceeded.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft³/s at 1300 June 14, gage height, 5.90 ft; minimum daily, 19 ft³/s, May 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	49	44	37	40	74	59	130	140	125	145	155
2	87	49	42	35	40	76	56	304	133	130	147	158
3	97	48	43	35	36	78	57	234	110	151	150	158
4	186	49	44	38	36	86	56	171	110	164	140	188
5	208	51	48	38	37	90	57	123	110	217	148	209
6	113	51	46	36	38	91	57	83	108	566	289	192
7	110	50	43	36	37	79	55	76	107	423	158	209
8	108	45	42	38	39	69	69	65	99	311	140	206
9	105	45	45	39	38	69	93	56	110	291	149	209
10	107	39	43	41	39	69	79	41	203	308	145	191
11	115	47	37	40	42	121	65	51	506	322	147	185
12	130	48	33	40	45	110	61	41	892	348	152	199
13	120	46	33	40	48	105	58	40	1100	292	176	174
14	103	48	33	42	48	76	55	28	1220	273	212	179
15	97	41	36	42	44	69	53	26	653	255	216	151
16	79	36	37	40	43	60	57	19	248	252	337	196
17	69	36	38	38	45	58	62	42	210	248	301	382
18	62	39	37	36	46	55	79	27	183	241	225	234
19	59	40	34	39	46	53	135	34	156	238	177	266
20	60	40	34	39	45	57	137	38	167	209	179	252
21	56	43	33	37	45	56	120	36	226	185	245	312
22	59	38	34	35	46	58	113	60	208	170	199	288
23	59	39	34	34	50	59	110	62	180	150	192	275
24	53	40	35	34	54	59	125	90	173	188	173	295
25	53	42	36	33	58	55	178	95	164	206	167	279
26	53	40	33	33	64	53	133	112	145	174	161	238
27	52	32	33	34	70	56	115	110	150	157	138	214
28	49	32	34	34	72	57	103	110	135	150	128	278
29	50	36	33	34	---	62	101	137	130	143	140	439
30	50	42	34	35	---	65	107	155	120	142	142	267
31	49	---	37	35	---	65	---	143	---	138	147	---
TOTAL	2747	1281	1168	1147	1291	2190	2605	2739	8196	7167	5565	6978
MEAN	88.6	42.7	37.7	37.0	46.1	70.6	86.8	88.4	273	231	180	233
MAX	208	51	48	42	72	121	178	304	1220	566	337	439
MIN	49	32	33	33	36	53	53	19	99	125	128	151
AC-FT	5450	2540	2320	2280	2560	4340	5170	5430	16260	14220	11040	13840

CAL YR 1989 TOTAL 62285 MEAN 171 MAX 698 MIN 32 AC-FT 123500
WTR YR 1990 TOTAL 43074 MEAN 118 MAX 1220 MIN 19 AC-FT 85440

09354500 LOS PINOS RIVER AT LA BOCA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1969 to May 1974, January 1988 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS TOTAL (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	
APR 09...	1100	94	282	8.3	9.0	8.7	120	37	6.7	21	0.8	1.6	
JUL 20...	1215	223	202	8.6	22.0	7.2	82	26	4.2	11	0.5	2.3	
DATE		ALKALINITY LAB (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
APR 09...	127	32	5.5	0.2	4.7	182	185	0.25	46.2	<0.10	<0.10	0.02	
JUL 20...	96	8.7	0.2	0.2	7.3	--	118	0.16	71.0	<0.10	<0.10	0.03	
DATE		NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC IN BOTTOM MATERIAL (UG/G AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	
APR 09...		0.38	0.4	0.08	0.03	0.01	4.7	2000	<1	4	10	<1	
JUL 20...		0.87	0.9	0.12	0.04	0.02	5.9	1700	1	--	10	<1	
DATE		CADMIUM RECOVERABLE FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOVERABLE FM BOTTOM MATERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	
APR 09...		<1	3	3	<1	<5	5	8	2300	21	9100	3	
JUL 20...		--	1	--	1	--	5	--	1600	150	--	3	
DATE		LEAD, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOVERABLE FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOVERABLE FM BOTTOM MATERIAL (UG/G AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL RECOVERABLE (UG/L AS SE)	SELENIUM, IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS ZN)	
APR 09...		10	220	290	<0.10	0.02	1	3	<1	<1	10	30	
JUL 20...		--	160	--	<0.10	--	<1	2	<1	--	10	--	

09354500 LOS PINOS RIVER AT LA BOCA, CO--Continued

PESTICIDE ANALYSIS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
APR 09...	1100	<10	<1.0	<1.0	<1.0	0.1	<1.0	<0.1	<0.1
JUL 20...	1215	--	--	--	--	--	--	--	--

DATE	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
APR 09...	<0.1	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1
JUL 20...	--	--	--	--	--	--	--	--

DATE	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
APR 09...	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
JUL 20...	--	--	--	--	--	--	--	--

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 31...	1430	47	318	9.0	MAY 09...	1405	61	233	17.0
JAN 12...	1350	40	291	0.0	JUN 14...	1445	1340	127	16.0
MAR 07...	0955	75	357	4.0	AUG 16...	1430	350	216	18.0

09355000 SPRING CREEK AT LA BOCA, CO

LOCATION.--Lat 37°00'40", long 107°35'47", in SE¼SW¼ sec.15, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on right bank in an excavated channel, 0.2 mi upstream from mouth, and 0.2 mi east of La Boca.

DRAINAGE AREA.--58 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Streamflow records, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733. Water-quality data available, May 1974, January 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 15 to Mar. 4. Records good except those for flows above 100 ft³/s, which are fair, and those for estimated daily discharges, which are poor. Part of flow is return waste from irrigation. Nearly all irrigation in this basin is water diverted from Los Pinos River which causes a considerable change in the annual pattern and natural flow.

AVERAGE DISCHARGE.--40 years, 31.9 ft³/s; 23,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft³/s, Sept. 6, 1970, gage height, 4.62 ft, from rating curve extended above 160 ft³/s, on basis of field estimate of peak flow; maximum gage height, 5.98 ft, Mar. 9, 1960 (backwater from ice); minimum daily discharge, 0.6 ft³/s, Nov. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 575 ft³/s at 2300 July 5, gage height, 2.90 ft; minimum daily, 2.0 ft³/s, Jan. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	7.4	3.7	2.9	2.8	5.3	3.9	3.9	47	45	58	55
2	29	6.9	3.8	2.7	2.8	5.5	3.5	7.4	43	50	62	58
3	25	6.5	3.6	2.7	2.7	5.6	3.3	19	45	59	60	59
4	65	6.1	3.9	2.6	2.6	5.7	3.5	5.7	47	64	55	65
5	54	6.5	4.2	2.6	2.7	5.7	3.5	4.0	45	154	57	66
6	47	6.5	3.9	2.5	2.7	5.9	4.3	19	43	186	76	63
7	43	6.1	3.6	2.6	2.8	6.7	3.5	4.8	42	172	64	61
8	42	6.1	3.6	2.6	2.9	6.1	4.8	4.8	45	97	61	58
9	42	5.7	3.8	2.7	2.9	5.7	4.7	4.4	47	84	64	58
10	39	6.5	3.6	2.9	2.8	5.6	4.4	4.4	63	74	61	55
11	34	6.1	3.2	2.9	3.0	20	3.3	4.4	65	67	61	52
12	36	6.1	2.9	2.8	3.1	16	3.0	6.0	57	64	64	50
13	13	6.1	2.7	2.6	3.4	15	2.8	6.1	45	60	69	50
14	7.4	5.7	2.8	2.7	3.2	7.2	2.7	7.3	47	84	79	49
15	6.9	5.8	2.9	2.7	3.0	5.2	2.7	9.9	47	64	72	49
16	8.2	5.2	2.9	2.8	3.1	4.9	2.7	12	47	62	151	48
17	6.9	5.3	3.0	2.5	3.4	4.4	2.7	13	47	57	97	70
18	6.5	5.5	3.1	2.4	3.5	4.4	4.5	21	47	54	70	54
19	6.5	5.5	3.2	2.5	3.5	4.4	14	22	52	59	60	68
20	6.9	5.4	3.1	2.7	3.3	4.4	7.5	34	50	57	69	60
21	6.9	5.1	3.0	2.6	3.4	4.4	4.4	37	54	53	62	67
22	6.9	4.9	2.8	2.4	3.5	3.9	3.3	39	54	55	59	52
23	6.9	4.6	2.8	2.3	3.8	3.9	3.0	40	54	57	55	53
24	6.9	4.9	2.9	2.2	4.2	3.5	4.3	40	54	58	49	51
25	6.5	5.3	2.9	2.0	4.6	3.5	5.2	36	54	57	51	42
26	6.7	5.2	2.8	2.2	4.9	3.5	4.4	36	49	54	51	41
27	6.9	4.5	2.7	2.4	5.0	3.5	2.8	39	52	53	50	41
28	6.9	3.8	2.7	2.6	5.3	3.5	2.7	37	50	54	50	58
29	6.9	3.0	2.8	2.6	---	4.3	2.3	43	49	58	53	83
30	7.4	3.3	2.7	2.7	---	4.8	2.7	45	47	57	53	44
31	7.3	---	2.8	2.8	---	4.4	---	42	---	59	51	---
TOTAL	599.3	165.6	98.4	80.2	94.9	186.9	120.4	647.1	1488	2228	1994	1680
MEAN	19.3	5.52	3.17	2.59	3.39	6.03	4.01	20.9	49.6	71.9	64.3	56.0
MAX	65	7.4	4.2	2.9	5.3	20	14	45	65	186	151	83
MIN	4.8	3.0	2.7	2.0	2.6	3.5	2.3	3.9	42	45	49	41
AC-FT	1190	328	195	159	188	371	239	1280	2950	4420	3960	3330

CAL YR 1989 TOTAL 11804.2 MEAN 32.3 MAX 253 MIN 2.2 AC-FT 23410
WTR YR 1990 TOTAL 9382.8 MEAN 25.7 MAX 186 MIN 2.0 AC-FT 18610

09355000 SPRING CREEK AT LA BOCA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: January 1988 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	
APR 09...	0930	4.00	1050	8.5	7.0	9.5	250	69	20	160	4	3.1	
JUL 20...	1030	56.4	275	8.1	20.0	7.2	99	30	5.9	22	1	2.6	
DATE		ALKALINITY LAB (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
APR 09...	311	250	21	0.4	4.9	732	715	1.0	7.91	<0.10	<0.10	0.02	
JUL 20...	122	28	3.5	0.2	8.3	258	174	0.35	39.3	<0.10	<0.10	0.09	
DATE		NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC IN BOTTOM MATERIAL (UG/G AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	
APR 09...		0.58	0.6	0.06	0.03	<0.01	7.4	6500	1	9	40	1	
JUL 20...		1.0	1.1	0.21	0.13	<0.01	8.7	1100	1	--	20	<1	
DATE		CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	
APR 09...		<1	6	3	5	<5	12	9	9400	12	8300	9	
JUL 20...		--	7	--	8	--	11	--	12000	150	--	13	
DATE		LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)	MERCURY, RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL RECOVERABLE (UG/L AS SE)	SELENIUM, IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	
APR 09...		10	650	560	<0.10	0.08	2	10	4	<1	50	40	
JUL 20...		--	670	--	0.10	--	<1	13	<1	--	70	--	

09355000 SPRING CREEK AT LA BOCA, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					MAY				
31...	1555	7.5	940	9.0	09...	1525	4.6	742	21.0
JAN					JUN				
12...	1540	2.8	1200	0.0	07...	1400	511	335	21.0
MAR					AUG				
07...	1130	6.5	1150	3.5	16...	1330	103	--	20.5

09361500 ANIMAS RIVER AT DURANGO, CO

LOCATION.--Lat 37°16'45", long 107°52'47", in SW¼SW¼ sec.20, T.35 N., R.9 W., La Plata County, Hydrologic Unit 14080104, on left bank at abandoned power plant at Durango, 0.8 mi upstream from Lightner Creek.

DRAINAGE AREA.--692 mi².

PERIOD OF RECORD.--June to December 1895, April 1896 to December 1898, April 1899 to December 1900, March to May 1901, April to November 1902, March to April 1903 (gage heights only, erroneously stated as discredited in WSP 1563), May to October 1903, July 1904 to December 1905, January to December 1910 (gage heights only), January to September 1911, January 1912 to current year. Monthly or yearly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 764: Drainage area. WSP 929: 1927(M). WSP 1243: 1911, 1918(M). WSP 1563: 1911-25 (monthly figures only).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,501.57 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 2, 1921.

REMARKS.--Estimated daily discharges: Dec. 7, 8, 11-14, 17-23, Dec. 30 to Jan. 1, Jan. 3-10, 13, Jan. 18 to Feb. 2 and Feb. 4, 18, 20. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 4,000 acres upstream from station. Natural regulation by many lakes and regulation for power upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--85 years (water years 1897-1900, 1905, 1911-90), 843 ft³/s; 610,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s, Oct. 5, 1911, gage height, 11 ft, present site and datum, from rating curve extended above 13,000 ft³/s; minimum daily, 94 ft³/s, Mar. 2, 1913.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, that of Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 6	0500	*4,660	*5.81	June 11	0700	4,520	5.74

Minimum daily discharge, 110 ft³/s, Dec. 18, and Jan. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	241	156	120	130	148	143	556	1630	831	321	291
2	195	203	136	121	130	135	149	566	1360	822	329	284
3	201	186	151	120	130	121	163	542	1600	883	324	279
4	285	200	134	120	150	117	177	638	2780	923	302	291
5	482	189	152	120	135	118	187	789	3770	842	282	309
6	387	189	152	120	134	121	192	963	3940	1430	279	396
7	345	210	150	120	131	118	195	1170	3660	1660	272	414
8	322	204	140	130	137	115	209	1250	3650	1330	278	418
9	300	185	139	130	134	117	217	1200	3490	1180	261	397
10	285	194	136	130	129	120	217	1170	3750	1110	265	346
11	276	188	120	127	139	122	217	1180	4060	967	253	346
12	272	178	130	125	135	123	238	1060	3640	874	238	324
13	255	178	120	120	131	119	251	997	3010	769	249	308
14	245	180	120	121	131	115	260	1190	2680	698	264	279
15	244	181	119	121	128	114	285	1380	2330	714	392	279
16	263	162	126	123	134	114	366	1320	1720	656	751	292
17	290	161	130	122	132	113	434	1250	1610	603	752	315
18	294	168	110	120	130	115	454	1350	1600	564	702	380
19	283	160	130	120	137	114	431	1410	1730	583	582	431
20	250	177	120	120	130	114	394	1330	1580	560	517	486
21	232	185	120	120	135	122	448	1520	1490	537	650	531
22	246	171	120	110	133	125	573	2060	1410	490	675	502
23	239	165	120	120	131	142	619	2500	1340	446	599	473
24	229	160	125	120	134	148	606	3210	1340	417	531	505
25	222	156	124	120	135	155	556	2820	1250	422	441	496
26	235	167	125	130	136	165	557	2590	1160	406	397	471
27	222	176	120	130	143	170	557	2350	1050	370	353	468
28	206	155	123	130	159	185	515	2530	1040	374	317	550
29	195	134	121	120	---	182	570	2620	1010	341	321	965
30	185	147	120	120	---	181	592	1900	887	333	333	969
31	180	---	120	120	---	170	---	1530	---	314	325	---
TOTAL	8059	5350	4009	3790	3773	4138	10772	46941	65567	22449	12555	12795
MEAN	260	178	129	122	135	133	359	1514	2186	724	405	426
MAX	482	241	156	130	159	185	619	3210	4060	1660	752	969
MIN	180	134	110	110	128	113	143	542	887	314	238	279
AC-FT	15990	10610	7950	7520	7480	8210	21370	93110	130100	44530	24900	25380

CAL YR 1989 TOTAL 217703 MEAN 596 MAX 2550 MIN 110 AC-FT 431800
WTR YR 1990 TOTAL 200198 MEAN 548 MAX 4060 MIN 110 AC-FT 397100

09362800 LEMON RESERVOIR NEAR DURANGO, CO

LOCATION.--Lat 37°22'57", long 107°39'44", in SE¼SW¼ sec.17, T.36 N., R.7 W., LaPlata County, Hydrologic Unit 14080104, in gatehouse at Lemon Dam on Florida River, 2.3 mi upstream from True Creek, and 15 mi northeast of Durango.

DRAINAGE AREA.--68.3 mi².

PERIOD OF RECORD.--Oct. 1, 1989 to Sept. 30, 1990.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Dam was completed in 1963. Capacity, 40,100 acre-ft, between elevations 7,948.00 ft, sill of outlet gate, and 8,148.00 ft, normal reservoir water surface elevation. Dead storage below elevation 8,005.00 ft, 354 acre-ft. Figures given are total contents.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 32,090 acre-ft, June 16, elevation, 8,134.34 ft; minimum contents, 9,630 acre-ft, Jan. 1, elevation, 8,078.60 ft.

MONTHEND ELEVATION IN FEET NGVD AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	8,084.15	11,070	-
Oct. 31.	8,081.58	10,390	-680
Nov. 30.	8,079.27	9,800	-590
Dec. 31.	8,078.62	9,640	-160
CAL YR 1989			-
Jan. 31.	8,078.87	9,700	+60
Feb. 28.	8,079.35	9,820	+120
Mar. 31.	8,081.16	10,280	+460
Apr. 30.	8,088.52	12,310	+2,030
May 31.	8,115.20	22,300	+9,990
June 30.	8,129.56	29,470	+7,170
July 31.	8,123.19	26,140	-3,330
Aug. 31.	8,109.42	19,780	-6,360
Sept. 30.	8,103.94	17,570	-2,210
WTR YR 1990.			+6,500

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM

LOCATION.--Lat 37°02'17", long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, Colorado, Hydrologic Unit 14080104, on right bank 0.8 mi downstream from Florida River, 2.5 mi upstream from Colorado-New Mexico State line, 8.5 mi north of Cedar Hill, and at mile 32.9.

DRAINAGE AREA.--1,090 mi², approximately.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for October and November 1933, published in WSP 1313.

REVISED RECORDS.--WSP 1563: 1940 and 1946 (monthly figures only).

GAGE.--Water-stage recorder. Elevation of gage is 5,960 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 14, 1937, at datum between 1.52 ft, and 1.36 ft, higher. Sept. 15, 1937, to Sept. 30, 1946, at datum 1.36 ft, higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 20,000 acres upstream from station. During water years 1944-49, Twin Rocks Canal diverted upstream from station for irrigation downstream. Slight regulation by Lemon Dam about 30 mi upstream on Florida River since November 1963 (capacity, 40,100 acre-ft). Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--57 years, 916 ft³/s, 663,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s, June 19, 1949, gage height, 11.45 ft; minimum, 63 ft³/s, Jan. 21, 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in October 1911 at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
June 6	1000	*4,800	*8.19	No other peak greater than base discharge			
Minimum daily, 144 ft ³ /s, Mar. 17, 18.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	260	217	e190	e186	224	195	643	1620	936	389	342
2	233	294	216	e187	e188	212	197	831	1460	913	396	325
3	247	247	197	e175	e179	189	212	676	1560	946	393	322
4	344	255	207	e194	e179	176	225	700	2590	1060	363	333
5	522	261	211	e207	e188	180	231	847	3730	963	324	332
6	451	250	209	e212	e176	191	244	1020	3980	1420	321	443
7	404	260	216	e220	e181	173	225	1190	3730	1910	305	453
8	384	259	207	e206	e184	158	269	1290	3700	1550	316	472
9	363	250	202	e211	e178	157	268	1290	3550	1370	289	470
10	347	243	192	e242	e180	161	258	1250	3750	1270	290	411
11	340	250	e188	e226	179	186	244	1240	4200	1110	280	399
12	336	246	e193	e195	179	185	269	1160	3850	1020	257	372
13	328	233	e186	e187	177	178	294	1050	3130	911	264	346
14	329	240	e206	e193	176	158	314	1200	2780	852	285	313
15	331	247	e227	e188	170	149	336	1410	2430	848	351	301
16	337	239	e193	e180	e176	146	412	1410	1870	788	817	310
17	346	223	e188	e177	e186	144	479	1340	1730	730	864	585
18	360	228	e193	e173	181	144	535	1400	1710	668	790	457
19	357	227	e192	e184	182	145	538	1480	1790	669	680	556
20	345	240	e208	e192	192	146	477	1440	1660	649	669	586
21	319	251	e207	e196	180	149	469	1550	1560	619	843	619
22	353	252	e210	e164	173	155	595	1990	1490	566	799	591
23	309	229	e205	e162	182	166	654	2380	1430	529	690	556
24	299	236	e192	e162	176	179	666	2940	1420	494	629	583
25	289	229	e192	e166	178	181	634	2730	1350	495	541	587
26	298	240	e189	e174	182	186	588	2470	1270	489	496	551
27	292	241	e189	e188	189	194	607	2270	1170	458	443	549
28	279	229	e200	e186	220	206	558	2360	1140	443	400	604
29	269	234	e184	e200	---	213	575	2500	1100	401	381	1060
30	255	212	e185	e181	---	213	651	1960	1000	393	383	1010
31	246	---	e184	e178	---	198	---	1560	---	370	376	---
TOTAL	10148	7305	6185	5896	5097	5442	12219	47577	67750	25840	14624	14838
MEAN	327	243	200	190	182	176	407	1535	2258	834	472	495
MAX	522	294	227	242	220	224	666	2940	4200	1910	864	1060
MIN	233	212	184	162	170	144	195	643	1000	370	257	301
AC-FT	20130	14490	12270	11690	10110	10790	24240	94370	134400	51250	29010	29430

CAL YR 1989 TOTAL 241000 MEAN 660 MAX 2320 MIN 184 AC-FT 478000
WTR YR 1990 TOTAL 222921 MEAN 611 MAX 4200 MIN 144 AC-FT 442200

e-Estimated.

09365500 LA PLATA RIVER AT HESPERUS, CO

LOCATION.--Lat 37°17'23", long 108°02'24", in NE¼SW¼ sec.14, T.35 N., R.11 W., La Plata County, Hydrologic Unit 14080105, on right bank at Hesperus 700 ft downstream from U.S. Highway 160.

DRAINAGE AREA.--37 mi², approximately.

PERIOD OF RECORD.--June to August 1904, May 1905 to September 1906, August to November 1910, June 1917 to current year. Monthly discharge only for some periods, published in WSP 1313. Records for Nov. 11 to Dec. 31, 1910, published in WSP 289, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1243: 1906(M). WSP 1563: 1923 (monthly figures only). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,104.71 ft above National Geodetic Vertical Datum of 1929. Prior to May 1, 1920, nonrecording gage, and May 1, 1920, to May 24, 1927, water-stage recorder, at several sites about 600 ft downstream at different datums. May 25, 1927, to Sept. 30, 1938, water-stage recorder at site 60 ft downstream and Oct. 1, 1938, to Sept. 30, 1941, at present site at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 18, Nov. 27 to Dec. 5, Dec. 7 to Jan. 12, Jan. 17, Jan. 28 to Feb. 26, Mar. 2, 7-8, 12, and Mar. 14-16. Records good except for estimated daily discharges, which are fair. Cherry Creek ditch exports water upstream from station for irrigation of about 2,000 acres in Cherry Creek drainage.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--74 years (water years 1906, 1918-90), 44.8 ft³/s; 32,460 acre-ft/yr.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood observed occurred Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 10	1315	---	a*3.04	May 23	2145	*198	2.99

Minimum daily discharge, 2.0 ft³/s, Feb. 16.

a-Backwater from ice.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	2.5	4.0	3.4	3.4	3.9	9.9	36	51	22	15	13
2	5.1	2.4	4.0	3.2	3.0	3.8	10	31	42	20	14	12
3	5.3	2.4	4.0	3.0	2.8	3.9	11	28	65	24	14	11
4	14	2.4	4.0	2.2	2.8	3.9	11	26	108	19	13	13
5	13	2.4	4.2	2.2	3.0	4.0	11	30	126	27	13	15
6	11	3.9	4.2	2.4	2.8	4.3	11	42	121	75	13	19
7	11	4.8	4.0	2.4	3.0	4.2	11	75	108	67	12	19
8	9.9	4.8	4.2	2.6	3.0	4.0	12	89	100	47	11	20
9	9.6	4.8	4.0	2.6	2.8	4.2	11	88	99	39	10	18
10	9.5	4.7	3.8	3.0	3.0	4.6	11	80	111	36	10	16
11	9.3	4.7	3.6	3.0	3.0	4.8	12	82	103	33	9.9	14
12	9.0	4.8	3.4	3.0	3.2	4.4	12	70	78	30	9.8	13
13	8.7	4.7	3.6	3.2	3.4	4.3	12	77	64	34	10	12
14	8.3	4.6	3.6	3.2	3.2	4.0	12	107	53	45	10	10
15	8.3	4.7	4.0	3.2	3.0	4.0	13	109	41	45	19	9.7
16	8.5	4.7	3.6	3.2	2.0	3.8	32	88	33	47	38	12
17	8.6	5.2	3.2	2.8	2.6	3.6	53	79	34	39	34	15
18	7.9	4.8	3.6	2.9	3.0	3.7	39	95	34	33	29	17
19	7.2	5.2	3.2	3.1	3.0	5.0	36	93	35	29	27	23
20	5.3	5.2	3.4	2.9	2.8	5.3	24	88	33	27	25	26
21	3.5	5.2	3.4	2.8	2.4	6.0	27	109	33	27	40	28
22	3.8	5.2	3.6	2.9	3.0	7.1	32	143	33	25	31	26
23	3.6	5.2	3.6	2.7	3.4	8.2	32	154	32	23	27	27
24	3.6	5.3	3.6	2.8	3.4	9.2	28	168	34	23	24	26
25	3.6	4.8	3.6	2.8	3.6	9.9	20	144	33	23	22	23
26	3.8	4.9	3.6	2.9	3.6	9.8	25	130	31	22	20	20
27	3.4	4.8	3.8	2.8	3.8	9.4	30	111	29	19	14	20
28	3.0	4.4	4.0	2.8	3.8	9.2	28	101	28	18	11	31
29	2.9	4.2	4.0	3.0	---	9.7	38	85	25	17	11	30
30	2.9	4.2	3.6	3.0	---	9.5	36	59	24	17	14	30
31	2.5	---	3.0	3.6	---	9.6	---	50	---	17	13	---
TOTAL	211.3	131.9	115.4	89.6	85.8	181.3	649.9	2667	1741	969	563.7	568.7
MEAN	6.82	4.40	3.72	2.89	3.06	5.85	21.7	86.0	58.0	31.3	18.2	19.0
MAX	14	5.3	4.2	3.6	3.8	9.9	53	168	126	75	40	31
MIN	2.5	2.4	3.0	2.2	2.0	3.6	9.9	26	24	17	9.8	9.7
AC-FT	419	262	229	178	170	360	1290	5290	3450	1920	1120	1130

CAL YR 1989 TOTAL 9532.0 MEAN 26.1 MAX 138 MIN 2.4 AC-FT 18910
WTR YR 1990 TOTAL 7974.6 MEAN 21.8 MAX 168 MIN 2.0 AC-FT 15820

09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'51", long 108°11'17", in NW¼SE¼ sec.10, T.32 N., R.13 W., La Plata County, CO, Hydrologic Unit 14080105, on right bank at Colorado-New Mexico State line, 0.2 mi downstream from Ponds Arroyo, and 4.8 mi north of La Plata, NM.

DRAINAGE AREA.--331 mi².

PERIOD OF RECORD.--January 1920 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1934(M), 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 5,975.15 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 17, 1934.

REMARKS.--Estimated daily discharges: Nov. 15-20, 23, 24, Nov. 27 to Feb. 7, Feb. 9, 10, 15-18, 22, and Feb. 23. Records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 15,000 acres, mostly upstream from station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--70 years, 36.0 ft³/s; 26,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft³/s, Aug. 24, 1927, gage height, 11.36 ft, present datum, from rating curve extended above 750 ft³/s, on basis of slope-area measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,100 ft³/s at 1945 Sept. 28, gage height, 5.70 ft; minimum daily, 0.78 ft³/s, July 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	4.6	1.6	6.0	6.0	12	4.2	29	38	8.9	2.0	1.9
2	3.9	5.4	2.0	5.5	5.0	11	4.8	43	39	4.4	1.5	1.8
3	3.7	5.9	1.8	5.0	5.0	11	4.4	23	36	2.3	1.4	1.7
4	9.0	4.6	1.8	2.0	5.0	11	4.5	22	49	.78	1.4	5.5
5	7.7	4.4	2.0	2.5	6.0	12	5.5	17	53	27	1.4	3.1
6	5.9	3.5	2.0	3.0	8.0	13	5.7	20	52	43	1.4	7.6
7	4.9	2.3	1.8	3.0	7.0	12	5.8	26	58	62	1.1	5.9
8	4.2	2.5	3.0	3.5	7.9	12	7.0	39	67	17	.89	4.5
9	3.6	1.6	5.0	4.0	8.0	12	7.1	50	67	8.5	.89	4.2
10	3.5	1.1	4.5	5.0	8.0	13	6.3	48	77	12	1.1	3.8
11	4.1	1.2	4.0	6.0	8.4	15	5.9	54	89	16	1.9	3.5
12	3.6	1.7	3.0	6.0	8.0	14	5.6	44	63	15	2.2	2.8
13	4.4	1.8	3.5	5.5	8.3	14	5.1	42	50	16	2.4	2.7
14	3.3	2.3	3.5	5.0	8.3	12	5.2	54	42	25	4.0	2.3
15	3.2	2.0	4.0	5.0	8.0	12	5.2	56	33	18	5.0	2.2
16	3.8	2.0	4.0	3.0	6.0	12	4.5	47	29	20	22	2.7
17	2.6	2.0	4.0	2.0	4.0	12	8.0	47	27	18	6.5	6.2
18	2.7	2.0	5.0	4.0	6.0	11	21	52	20	17	2.2	10
19	2.9	2.0	4.5	6.0	7.5	11	27	50	20	12	2.7	9.9
20	3.7	2.0	5.0	6.0	8.8	9.1	24	53	18	9.8	4.4	8.6
21	4.1	2.0	5.0	5.5	8.9	8.0	16	53	16	8.4	4.5	5.4
22	6.4	1.5	5.0	4.0	7.0	8.3	14	63	15	8.7	3.5	4.2
23	4.6	.80	5.0	4.5	8.0	5.7	22	68	13	7.0	3.9	3.8
24	2.6	1.4	5.0	5.0	9.1	3.4	30	77	11	5.4	5.4	3.7
25	2.7	1.7	5.0	5.0	9.4	2.1	25	69	14	4.7	6.0	3.2
26	3.5	1.6	5.0	5.5	9.5	2.9	18	76	14	3.1	5.8	3.1
27	4.2	1.4	6.0	6.0	9.9	5.8	17	69	13	1.9	5.4	3.3
28	4.2	1.5	6.0	6.0	11	5.3	15	76	11	1.1	4.7	135
29	4.4	1.6	5.5	6.0	---	4.8	16	72	11	1.4	4.2	16
30	5.2	1.6	5.0	6.0	---	4.1	23	61	9.5	1.6	3.4	6.7
31	5.7	---	5.0	6.0	---	4.5	---	44	---	2.3	2.4	---
TOTAL	132.4	70.00	123.5	147.5	212.0	296.0	362.8	1544	1054.5	398.28	115.58	275.3
MEAN	4.27	2.33	3.98	4.76	7.57	9.55	12.1	49.8	35.1	12.8	3.73	9.18
MAX	9.0	5.9	6.0	6.0	11	15	30	77	89	62	22	135
MIN	2.6	.80	1.6	2.0	4.0	2.1	4.2	17	9.5	.78	.89	1.7
AC-FT	263	139	245	293	421	587	720	3060	2090	790	229	546

CAL YR 1989 TOTAL 7550.60 MEAN 20.7 MAX 98 MIN .80 AC-FT 14980
WTR YR 1990 TOTAL 4731.86 MEAN 13.0 MAX 135 MIN .78 AC-FT 9390

09371000 MANCOS RIVER NEAR TOWAOC, CO

LOCATION.--Lat 37°01'39", long 108°44'27", Ute Indian Reservation, Montezuma County, Hydrologic Unit 14080107, on left bank 700 ft upstream from bridge on U.S. Highway 666, 2.0 mi north of Colorado-New Mexico State line, 6.0 mi upstream from Aztec Creek, and 12 mi south of Towaoc.

DRAINAGE AREA.--526 mi².

PERIOD OF RECORD.--Streamflow records, October 1920 to September 1943, February 1951 to current year. Monthly discharge only for some periods, published in WSP 1313. Water-quality data available, August 1969 to June 1972, October 1983 to current year. Sediment data available, April to December 1961.

REVISED RECORDS.--WSP 1733: 1924 (monthly figures only). WDR CO-83-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,055.98 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 11, 1954.

REMARKS.--Estimated daily discharges: Oct. 1-4, Nov. 18 to Feb. 23, Mar. 31 to Apr. 8, Apr. 13-18, May 10-16, May 18 to July 6, July 13, July 24 to Aug. 17 and Aug. 22 to Sept. 30. Records fair except for flows above 200 ft³/s and those for estimated daily discharges, which are poor. Diversions for irrigation of about 10,000 acres upstream from station. One diversion upstream from station for irrigation of about 100 acres downstream from station. Flow regulated by Jackson Gulch Reservoir, capacity, 10,000 acre-ft since March 1949. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

AVERAGE DISCHARGE.--62 years, 53.2 ft³/s; 38,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,300 ft³/s, Oct. 14, 1941, gage height, 7.30 ft, present site and datum, from rating curve extended above 200 ft³/s, on basis of slope-area measurement of peak flow; maximum gage height, 8.50 ft, Sept. 6, 1970; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 19	unknown	*928	a*4.78	No other peak greater than base discharge			
No flow many days. a from high-water mark							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	7.6	7.0	5.5	6.0	19	2.2	8.1	.00	.00	.03	5.0
2	.00	10	7.0	5.5	6.0	23	.65	20	.00	.00	.01	6.0
3	.00	10	6.5	5.5	6.5	20	.00	35	.00	.00	.00	7.5
4	.00	11	6.5	5.0	7.0	17	.00	30	.00	.00	.00	30
5	33	13	6.5	5.0	7.0	14	.00	18	.00	.00	.00	20
6	15	12	6.5	5.0	7.5	15	.00	14	.00	.19	.00	18
7	6.7	12	6.5	5.5	7.5	19	.00	5.7	.00	29	.00	20
8	5.5	12	6.5	6.0	8.0	17	.00	.91	.00	58	.00	22
9	5.2	11	6.0	6.0	7.5	15	.97	.08	.00	17	.00	26
10	5.2	11	6.0	6.0	7.5	18	2.4	.01	.00	8.9	.00	36
11	5.2	11	5.5	6.0	8.0	20	.43	.00	.00	8.3	.00	28
12	5.2	11	5.5	6.0	9.0	23	.08	.00	.00	2.9	.00	24
13	5.5	11	5.5	6.0	9.0	23	.01	.00	.00	.01	.00	22
14	6.1	11	5.5	6.0	9.5	20	.00	.00	.00	2.3	.00	22
15	6.1	10	5.5	6.0	8.0	14	.00	.00	.00	22	.00	22
16	6.1	9.3	5.5	6.0	6.0	14	.00	.00	.00	15	160	24
17	6.4	10	5.5	5.5	7.0	13	.00	.02	.00	16	60	28
18	7.3	9.5	4.2	5.5	8.5	14	.00	.00	.00	10	17	46
19	7.3	9.5	4.4	5.5	11	14	.40	.00	.00	7.1	17	95
20	7.9	9.5	4.6	6.0	8.5	12	9.6	.00	.00	5.0	26	60
21	9.3	9.0	4.8	6.0	7.5	13	7.6	.00	.00	2.9	99	46
22	12	9.0	5.5	5.5	8.0	13	6.4	.00	.00	2.4	12	42
23	15	8.5	5.5	5.5	10	12	5.1	.00	.00	1.7	11	38
24	16	8.0	5.5	5.5	13	11	4.9	.00	.00	1.0	10	36
25	14	8.5	5.5	5.5	16	11	7.3	.00	.00	.75	9.0	34
26	12	8.5	5.5	6.0	17	11	8.9	.00	.00	.55	7.5	34
27	8.0	8.0	5.5	6.0	17	11	5.6	.00	.00	.44	6.5	32
28	8.5	7.5	5.0	6.0	19	11	4.6	.00	.00	.32	6.0	32
29	8.6	6.5	4.6	6.0	---	12	5.2	.00	.00	.24	5.5	32
30	7.9	6.5	5.0	6.0	---	12	5.0	.00	.00	.18	5.0	32
31	7.3	---	5.5	6.0	---	11	---	.00	---	.10	4.6	---
TOTAL	252.30	291.4	174.6	177.5	262.5	472	77.34	131.82	0.00	212.28	456.14	919.5
MEAN	8.14	9.71	5.63	5.73	9.37	15.2	2.58	4.25	.000	6.85	14.7	30.6
MAX	33	13	7.0	6.0	19	23	9.6	35	.00	58	160	95
MIN	.00	6.5	4.2	5.0	6.0	11	.00	.00	.00	.00	.00	5.0
AC-FT	500	578	346	352	521	936	153	261	.00	421	905	1820

CAL YR 1989 TOTAL 10536.06 MEAN 28.9 MAX 510 MIN .00 AC-FT 20900
WTR YR 1990 TOTAL 3427.38 MEAN 9.39 MAX 160 MIN .00 AC-FT 6800

09371002 NAVAJO WASH NEAR TOWAOC, CO

LOCATION.--Lat 37°12'03", long 108°41'50", in SW¼SE¼ sec.9, T.33N., R.17 W., Ute Mountain Ute Indian Reservation, Montezuma County, Hydrologic Unit 14080107, on left bank 150 ft upstream from Towaoc Road crossing, 0.2 mi downstream from Ismay Draw and 1.6 mi east of Towaoc, Co.

DRAINAGE AREA.--26.3 mi².

PERIOD OF RECORD.--October 1986 to September 1988, April 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,600 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 30, 1986, (fragmentary) USBR operated staff gage or water-stage recorder at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 13 to Feb. 4, Feb. 6, 8, 9, 11, 12, and Apr. 20-23. Records good except for estimated daily discharges, and flows above 77 ft³/s, which are poor. Flow regulated by Montezuma Valley Irrigation District through series of canals and ditches from Dolores Project. Most of water is return flow. Diversions from Dolores River basin to San Juan River basin for irrigation of about 2450 acres upstream from station. No diversions upstream for irrigation downstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge determined, 366 ft³/s, July 31, 1989, gage height, 5.63 ft, on the basis of slope conveyance computation at gage-height 5.63 ft; minimum daily observed, 0.47 ft³/s, Mar. 28, 1988, but may have been less during period of no record Oct. 1 to Apr. 5, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 37 ft³/s, May 2; minimum daily 0.50 ft³/s, Dec. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.1	.85	.70	.60	2.4	.84	29	10	6.3	13	11
2	2.0	1.2	.85	.70	.60	1.4	.77	37	13	6.2	16	11
3	6.2	1.2	.80	.70	.60	1.2	.68	32	6.1	4.7	16	36
4	16	1.2	.80	.65	.65	5.2	.67	13	4.1	5.7	16	23
5	16	1.2	.80	.60	.70	1.6	.67	14	5.3	3.3	14	8.5
6	8.6	1.2	.80	.60	.70	1.1	.67	10	10	8.7	14	13
7	3.3	1.2	.80	.65	.70	1.3	.70	9.5	15	12	13	11
8	2.8	1.2	.80	.65	.75	1.1	.91	7.3	13	28	6.3	13
9	3.0	1.2	.75	.65	.85	1.1	1.1	10	12	12	1.5	11
10	5.4	1.1	.70	.65	1.0	1.0	1.4	13	12	11	1.8	10
11	8.9	1.0	.70	.65	1.1	1.8	1.2	17	19	11	4.1	15
12	6.3	1.0	.70	.65	1.2	1.6	1.1	16	18	4.8	8.3	14
13	2.2	1.0	.70	.60	1.8	1.6	4.5	11	16	5.7	16	13
14	.85	1.0	.70	.60	4.4	1.3	6.3	11	7.8	11	20	13
15	.90	1.1	.70	.60	1.6	1.1	11	12	1.8	16	15	11
16	.95	1.1	.75	.60	6.3	.98	3.2	12	1.6	31	23	7.2
17	.80	1.1	.70	.60	6.4	.70	5.8	11	5.2	22	32	8.5
18	.80	1.1	.60	.60	1.3	.70	16	6.4	3.2	20	12	18
19	.85	1.1	.50	.60	1.1	.70	12	5.2	3.6	22	21	27
20	.90	1.1	.70	.55	1.0	.80	4.8	5.1	6.6	20	18	24
21	.95	1.1	.70	.55	1.0	.77	2.0	5.2	5.2	18	10	20
22	1.0	1.1	.75	.55	1.3	1.1	4.0	6.4	2.1	17	7.6	18
23	1.0	1.0	.75	.55	1.2	1.1	7.5	7.0	2.3	15	5.5	17
24	1.0	.95	.75	.55	1.1	.98	13	11	4.6	5.2	6.7	17
25	.95	1.0	.75	.55	1.1	.91	16	9.6	2.3	5.8	9.4	15
26	1.0	1.0	.75	.55	1.0	.84	11	6.7	3.3	2.9	7.1	14
27	1.1	1.0	.70	.60	1.1	.91	14	3.8	5.2	9.4	7.1	19
28	1.2	.90	.70	.60	4.2	.87	17	5.8	6.4	6.7	4.7	19
29	1.2	.75	.65	.60	---	.84	16	8.9	9.4	7.5	5.0	18
30	1.2	.80	.65	.60	---	.84	24	8.7	9.9	11	9.4	18
31	1.1	---	.70	.60	---	.84	---	8.3	---	6.4	13	---
TOTAL	99.75	32.00	22.55	18.90	45.35	38.68	198.81	362.9	234.0	366.3	366.5	473.2
MEAN	3.22	1.07	.73	.61	1.62	1.25	6.63	11.7	7.80	11.8	11.8	15.8
MAX	16	1.2	.85	.70	6.4	5.2	24	37	19	31	32	36
MIN	.80	.75	.50	.55	.60	.70	.67	3.8	1.6	2.9	1.5	7.2
AC-FT	198	63	45	37	90	77	394	720	464	727	727	939

WTR YR 1990 TOTAL 2258.94 MEAN 6.19 MAX 37 MIN .50 AC-FT 4480

09371500 McELMO CREEK NEAR CORTEZ, CO

LOCATION.--Lat 37°19'23", long 108°40'22", in SE¼ NW¼ sec.1, T.35N., R.17 W., Montezuma County, Hydrologic Unit 14080202, on left bank 150 ft downstream from mouth of Mud Creek, and 4 mi southwest of Cortez.

DRAINAGE AREA.--230 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1926 to September 1929, April 1940 to September 1945, October 1950 to September 1954 (monthly discharge only for some periods, published in WSP 1313), January 1982 to current year.

REVISED RECORDS.--WSP 1313: 1927, 1927 (M).

GAGE.--Water-stage recorder. Elevation of gage is 5,700 ft above National Geodetic Vertical Datum of 1929, by barometer. Prior to Sept. 30, 1929, at site 3 mi downstream at different datum. Mar. 29, 1940 to Nov. 2, 1941, at site 150 ft upstream at datum 4.20 ft, higher. Nov. 3, 1941 to Sept. 30, 1945, at present site at datum 4.00 ft, higher. Oct. 1, 1950 to Sept. 30, 1954, at present site at datum 2.50 ft, higher, Jan. 1, 1982, to present, at former site at same datum.

REMARKS.--Estimated daily discharges: Oct. 5 to Feb. 11. Records good except for those above 225 ft³/s, which are fair, and estimated daily discharges, which are poor. Diversions for irrigation of about 200 acres upstream from station. Flow is mainly return flows from irrigated lands for Montezuma Irrigation District (water imported from Dolores River basin).

AVERAGE DISCHARGE.--20 years (water years 1927-29, 1941-45, 1951-54, 1983-90), 55.6 ft³/s; 40,280 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft³/s, Sept. 9, 1927, gage height, 6.45 ft, from rating curve extended above 240 ft³/s, on basis of slope-area measurement at gage height, 5.72 ft; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 930 ft³/s at 2000 July 7, gage height, 7.10 ft; minimum daily, 13 ft³/s, Apr. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	36	28	22	18	41	19	29	25	31	52	48
2	38	36	28	22	19	35	20	37	25	29	43	52
3	38	36	26	22	19	33	20	27	24	31	42	57
4	92	36	26	20	20	31	19	19	24	41	43	73
5	70	38	26	20	22	30	19	28	24	46	45	79
6	55	38	26	20	22	28	18	26	24	82	63	85
7	50	38	26	20	22	30	16	19	26	232	55	83
8	44	38	26	22	24	30	18	14	30	169	51	85
9	38	38	24	22	22	27	19	14	30	100	46	97
10	34	36	22	22	22	26	16	17	40	84	43	95
11	30	32	22	22	24	37	16	17	92	71	40	91
12	30	32	22	22	26	35	15	18	59	66	43	89
13	28	32	22	20	28	32	15	15	50	63	61	85
14	26	32	22	20	28	28	15	19	46	105	158	86
15	26	32	22	20	22	29	14	19	43	138	130	81
16	28	32	24	20	18	28	13	20	41	253	233	81
17	24	34	24	19	20	26	16	20	43	94	298	89
18	24	34	20	18	28	25	20	27	42	78	129	107
19	26	36	20	18	26	23	19	20	40	74	87	205
20	28	34	22	18	24	22	20	20	38	63	76	132
21	30	36	24	18	24	22	19	19	40	60	83	125
22	30	34	24	17	27	22	19	18	42	57	58	101
23	32	32	24	17	33	21	20	20	42	57	54	95
24	32	30	24	18	34	20	25	26	41	57	53	98
25	32	32	24	18	31	20	29	25	39	55	50	94
26	32	32	24	18	30	19	22	26	36	53	51	87
27	34	32	22	18	33	20	17	23	36	51	47	71
28	38	28	22	18	48	20	17	27	36	50	46	80
29	38	24	20	18	---	20	17	28	32	50	47	70
30	36	26	20	18	---	19	23	26	33	51	45	66
31	36	---	22	18	---	19	---	26	---	53	45	---
TOTAL	1134	1006	728	605	714	818	555	689	1143	2444	2317	2687
MEAN	36.6	33.5	23.5	19.5	25.5	26.4	18.5	22.2	38.1	78.8	74.7	89.6
MAX	92	38	28	22	48	41	29	37	92	253	298	205
MIN	24	24	20	17	18	19	13	14	24	29	40	48
AC-FT	2250	2000	1440	1200	1420	1620	1100	1370	2270	4850	4600	5330

CAL YR 1989 TOTAL 17181 MEAN 47.1 MAX 317 MIN 20 AC-FT 34080
WTR YR 1990 TOTAL 14840 MEAN 40.7 MAX 298 MIN 13 AC-FT 29440

09371500 McELMO CREEK NEAR CORTEZ, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Jan. 1, 1982 to current year. Water-quality analysis since August 1987.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Feb. 6, 1982 to current year.

WATER TEMPERATURES: Feb. 6, 1982 to current year.

INSTRUMENTATION.--Water-quality monitor since January 1982.

REMARKS.--Stream is not well mixed at location of monitor. Specific conductance readings from the monitor may not represent mean specific conductance of the entire stream. Daily maximum and minimum specific conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 5,020 microsiemens April 16, 1990; minimum, 785 microsiemens Aug. 30, 1988.

WATER TEMPERATURES: Maximum, 26.5°C July 18,19 1985, July 1, 1990; minimum, 0.0°C many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 5,020 microsiemens April 16; minimum, 1050 microsiemens May 18.

WATER TEMPERATURES: Maximum, 26.5°C July 1; minimum 0.0°C, many days during November through February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV											
29...	1300	26	3440	8.0	0.0	--	1800	370	210	240	2
DEC											
29...	1300	21	2850	8.4	0.0	--	1700	370	200	210	2
FEB											
21...	1515	24	3100	8.3	2.5	--	1600	310	200	240	3
MAR											
27...	1630	19	3490	8.8	11.5	10.1	1800	340	230	250	3
APR											
25...	1230	29	2430	8.7	11.5	--	1400	270	170	180	2
MAY											
09...	1200	15	2650	8.5	12.0	--	1300	260	170	200	2
JUN											
22...	1245	46	1740	8.6	19.0	--	850	190	91	90	1
29...	1200	33	1540	8.4	20.0	--	800	180	85	88	1
JUL											
13...	1400	71	1600	8.5	24.0	--	780	180	81	71	1
16...	1700	131	1690	8.2	22.0	7.1	820	200	78	87	1
19...	1430	78	1680	8.4	23.0	6.8	860	200	87	82	1
AUG											
15...	1230	118	1570	8.3	17.5	--	820	190	84	68	1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
NOV										
29...	5.0	310	2000	40	0.5	11	3080	4.20	217	5.1
DEC										
29...	4.5	304	1800	39	0.4	12	2840	3.86	164	4.5
FEB										
21...	5.5	289	1900	55	0.4	10	2920	3.97	191	5.5
MAR										
27...	5.5	238	1700	47	--	--	2740	4.69	181	4.7
APR										
25...	5.4	221	1400	31	0.5	8.0	2210	3.01	172	3.1
MAY										
09...	5.4	258	1600	31	0.4	9.3	2440	3.32	98.9	2.4
JUN										
22...	4.3	220	900	15	0.2	9.3	1440	1.95	178	0.9
29...	4.6	238	700	18	0.5	12	1240	1.68	110	1.0
JUL										
13...	4.2	233	700	15	0.3	12	1210	1.64	232	1.0
16...	5.9	196	830	17	--	12	1350	1.86	485	0.5
19...	4.0	232	700	15	--	12	1240	1.80	278	0.9
AUG										
15...	6.1	232	750	19	0.2	12	1270	1.73	404	<0.1

09371500 McELMO CREEK NEAR CORTEZ, CO--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1810	---	3100	3270	2770	3510	3780	2640	1340	---	1440	1780
2	1810	---	3230	3210	2750	3560	3880	2990	1440	1530	1410	1750
3	1820	---	3220	3080	2730	3430	3960	3990	1530	1570	1460	1710
4	2020	---	3280	3150	2770	3540	3970	3410	1630	1500	1460	1910
5	---	---	3270	3210	2900	3600	4010	2140	1510	---	1400	1700
6	---	---	3290	3180	2910	3650	4020	2120	1540	---	1400	1760
7	---	---	3340	3140	2750	3770	4110	2360	1500	---	1570	1660
8	---	---	3400	3010	2660	3760	4190	2780	1440	---	1640	1620
9	---	---	3360	2930	2850	3740	4160	2750	1390	---	1760	1610
10	---	---	3420	2880	3100	3730	4290	2560	1230	---	1840	1550
11	---	---	3480	2860	2860	3620	4230	2300	1770	---	1740	1610
12	---	---	3500	2900	2550	3750	4380	2130	1750	---	1790	1520
13	---	---	3560	2980	2460	3880	4400	2060	1730	---	1710	1530
14	---	---	3520	2900	2450	3830	4380	1920	1730	1610	1750	1520
15	---	---	3410	2950	2950	3680	4430	1570	1700	1530	1620	1540
16	---	---	3350	3090	3250	3560	4650	1470	1750	1770	1600	1550
17	---	---	3460	3050	3180	3530	4060	1450	1700	1530	1640	1550
18	---	---	3490	3020	3090	3540	3680	1140	1690	1630	1600	1640
19	---	---	3530	2950	3110	3590	3590	1560	1780	1610	1500	1830
20	---	---	3540	2940	3240	3600	3290	1480	1700	1680	1510	1610
21	---	---	3500	2840	3370	3630	3200	1640	1710	1690	1590	1690
22	---	---	3520	2780	3460	3680	3140	1890	1680	1570	1630	1670
23	---	---	3510	2860	3190	3710	3110	1860	1610	1560	1730	1660
24	---	---	3520	2950	3110	3630	3160	1710	1500	1530	1700	1650
25	---	---	3530	3200	3260	3550	2850	1630	1530	1480	1700	1620
26	---	---	3610	3420	3290	3500	2650	1480	1470	1490	---	1620
27	---	---	3640	3340	3170	3530	2310	1690	1470	1430	---	1750
28	---	---	3560	3300	3170	3530	2710	1560	1440	1530	---	1790
29	---	---	3390	3330	---	3500	2820	1450	---	1480	---	1900
30	---	3180	3250	3090	---	3670	2760	1370	---	1490	1890	2000
31	---	---	3250	2950	---	3750	---	1360	---	1470	1820	---

09371500 McELMO CREEK NEAR CORTEZ, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.7	9.8	4.1	.3	.0	.0	.0	.0	.0	.0	7.4	1.5
2	13.7	8.7	3.2	.0	.0	.0	.0	.0	.0	.0	7.4	2.1
3	13.0	9.0	3.2	.0	.0	.0	.0	.0	.0	.0	5.2	2.5
4	11.9	11.0	4.0	.0	.0	.0	.0	.0	.0	.0	7.9	3.0
5	12.6	9.4	4.9	.5	.0	.0	.0	.0	.0	.0	7.2	4.1
6	12.5	8.0	4.6	1.8	.0	.0	.0	.0	.0	.0	4.9	2.9
7	13.1	8.0	5.1	1.2	.0	.0	.0	.0	.0	.0	7.6	1.9
8	12.7	7.1	4.2	.4	.0	.0	.0	.0	.0	.0	8.9	2.1
9	12.6	6.9	4.8	.2	.0	.0	.0	.0	.0	.0	9.3	4.2
10	13.0	7.1	5.6	1.4	.0	.0	.0	.0	.0	.0	9.8	5.8
11	12.7	7.0	6.0	1.9	.0	.0	.0	.0	.0	.0	7.3	4.5
12	12.8	6.6	6.0	1.8	.0	.0	.0	.0	.0	.0	4.4	2.6
13	12.3	6.6	5.5	1.5	.0	.0	.0	.0	.2	.0	3.7	.9
14	13.3	8.2	4.9	.9	.0	.0	.0	.0	.0	.0	5.9	.0
15	13.2	8.8	3.0	.0	.0	.0	.0	.0	.0	.0	7.5	.5
16	13.5	9.4	2.9	.0	.0	.0	.0	.0	.0	.0	8.6	.7
17	11.4	7.2	1.9	.0	.0	.0	.0	.0	.0	.0	8.1	1.5
18	9.9	4.9	2.0	.0	.0	.0	.0	.0	.0	.0	11.2	2.4
19	9.5	4.2	3.0	.0	.0	.0	.0	.0	.1	.0	12.2	3.0
20	8.4	4.2	3.3	.0	.0	.0	.0	.0	.1	.0	10.0	4.7
21	9.4	5.9	4.0	1.1	.0	.0	.0	.0	2.5	.0	13.7	4.9
22	11.5	8.0	3.6	.0	.0	.0	.0	.0	2.2	.0	13.3	5.5
23	11.0	6.4	3.2	.0	.0	.0	.0	.0	2.7	.0	15.2	8.1
24	11.0	5.8	2.3	.0	.0	.0	.0	.0	3.2	.0	14.7	5.8
25	9.5	6.5	4.4	.7	.0	.0	.0	.0	4.0	.3	14.2	5.9
26	9.1	5.9	4.6	2.2	.0	.0	.0	.0	6.2	1.0	12.5	6.0
27	7.8	3.4	1.9	.0	.0	.0	.0	.0	6.5	3.7	11.6	8.3
28	6.6	2.7	2.0	.0	.0	.0	.0	.0	6.1	3.3	12.4	6.4
29	5.2	1.8	.0	.0	.0	.0	.0	.0	---	---	9.5	6.4
30	4.4	.2	.0	.0	.0	.0	.0	.0	---	---	9.6	5.9
31	4.3	.0	---	---	.0	.0	.0	.0	---	---	11.5	4.3
MONTH	14.7	.0	6.0	.0	.0	.0	.0	.0	6.5	.0	15.2	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.8	4.6	10.3	7.9	18.4	12.2	26.5	18.3	23.1	15.9	23.7	18.1
2	12.6	5.2	12.8	7.5	18.4	9.7	26.3	19.0	23.0	17.7	23.3	18.5
3	14.1	6.2	15.9	8.4	21.5	11.6	23.7	19.0	22.7	16.0	23.4	17.2
4	15.8	6.0	18.9	9.7	22.6	13.6	25.1	17.9	23.1	15.9	22.6	17.6
5	16.0	7.8	19.0	9.5	22.4	14.3	21.5	19.2	23.1	16.1	21.7	18.3
6	16.6	6.6	19.8	9.8	22.7	14.6	23.6	17.6	22.8	15.2	22.5	16.6
7	13.3	7.3	19.5	10.5	23.1	14.7	22.7	18.3	23.8	16.2	22.2	16.3
8	12.9	9.2	19.2	11.5	24.1	14.9	23.2	18.6	23.6	16.7	22.6	16.9
9	13.4	7.6	17.5	8.0	21.3	16.3	23.4	19.5	24.6	17.1	19.8	15.8
10	16.1	6.2	17.4	8.4	20.5	16.4	25.1	18.9	25.2	17.7	20.7	14.8
11	15.4	7.3	16.1	10.2	21.9	15.4	25.7	19.1	23.9	17.2	21.2	15.2
12	16.4	7.7	17.9	10.2	22.3	16.2	25.9	19.1	21.1	16.6	21.1	14.9
13	16.2	7.9	19.9	10.7	22.3	15.1	24.5	19.2	19.3	17.4	21.3	15.1
14	17.9	7.5	18.8	10.8	21.6	14.6	23.2	19.1	19.3	16.4	21.2	15.2
15	18.0	8.8	18.3	11.1	19.4	14.5	24.0	18.0	19.9	17.0	21.0	15.3
16	16.7	9.6	20.2	10.2	20.3	12.9	22.6	13.1	19.1	17.3	18.6	16.3
17	14.6	10.4	20.2	9.6	21.2	12.8	24.4	18.8	21.3	17.2	20.1	15.4
18	12.1	9.6	18.9	10.2	22.7	14.6	24.1	18.9	21.4	17.1	17.4	14.3
19	12.2	8.0	17.9	10.0	22.2	14.7	25.2	19.1	21.5	16.1	16.4	12.2
20	16.8	7.2	20.0	9.7	23.2	14.5	25.0	19.1	20.0	16.5	15.4	13.6
21	17.0	10.4	20.4	10.3	23.6	15.2	22.7	19.0	22.4	16.5	17.6	12.8
22	16.5	11.3	21.3	12.5	23.7	14.9	23.5	16.4	21.9	16.8	18.3	13.4
23	14.6	11.2	20.1	12.7	24.4	15.6	24.4	16.6	20.6	15.3	16.9	15.5
24	13.5	10.3	20.3	14.9	24.9	16.7	23.6	18.7	21.3	14.9	19.2	14.2
25	15.5	8.2	19.3	11.6	25.8	17.7	22.7	18.1	20.8	14.1	18.8	14.1
26	15.7	6.9	17.4	11.5	25.9	17.6	24.4	17.2	21.6	14.0	18.4	13.4
27	16.6	7.6	17.9	11.3	24.9	18.1	24.5	16.0	22.1	15.5	17.1	13.6
28	18.3	10.1	17.3	12.6	25.4	17.8	23.4	16.5	---	---	17.5	14.0
29	13.0	7.6	17.7	12.5	24.7	16.7	22.0	16.2	---	---	17.6	12.8
30	9.9	6.2	16.9	11.0	24.5	18.4	23.1	15.9	24.3	17.7	16.9	12.8
31	---	---	19.1	11.4	---	---	22.4	16.1	23.5	17.1	---	---
MONTH	18.3	4.6	21.3	7.5	25.9	9.7	26.5	13.1	---	---	23.7	12.2

09372000 McELMO CREEK NEAR COLORADO-UTAH STATE LINE

LOCATION.--Lat 37°19'27", long 109°00'54", in NE¼ sec.2, T.35 N., R.20 W., Montezuma County, Hydrologic Unit 14080202, on right bank 1.5 mi upstream from Colorado-Utah State line, 2.0 mi upstream from Yellowjacket Creek, and 2.0 mi west of former town of McElmo.

DRAINAGE AREA.--346 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Streamflow records, March 1951 to current year. Water-quality data available, November 1977 to September 1981, and August 1987 to current year.

REVISED RECORDS.--WSP 1925: 1951-52 (M), 1957 (M). WRD CO-1972: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 11, Dec. 13-20, Dec. 28 to Jan. 3, Jan. 7-24, 26, 27, Jan. 29 to Feb. 2 and Feb. 5. Records good except for those less than 3.2 cfs and those above 200 ft³/s, which are fair, and estimated daily discharges, which are poor. Diversions for irrigation of about 1,780 acres upstream from station. One diversion upstream from station for irrigation of about 60 acres downstream from station. Part of flow is return water from irrigated lands of Montezuma Irrigation District (water imported from Dolores River basin).

AVERAGE DISCHARGE.--39 years, 49.0 ft³/s; 35,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft³/s, Aug. 7, 1967, gage height, 7.58 ft, from floodmark in gage well, from rating curve extended above 2,100 ft³/s; maximum gage height, 8.13 ft, Sept. 6, 1970; minimum daily discharge, 0.08 ft³/s, Sept. 9-10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 620 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 8	0300	*1,530	*6.82	No other peak greater than base discharge			
Minimum daily, 1.4 ft ³ /s, Apr. 15.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	40	30	24	20	51	20	7.9	9.0	11	30	30
2	35	40	30	24	20	38	20	21	11	10	29	35
3	31	39	28	24	21	35	20	26	11	10	24	39
4	65	40	28	23	22	35	16	11	11	12	23	84
5	101	42	28	21	24	33	15	6.6	11	13	29	63
6	60	42	28	22	24	32	13	8.9	7.1	31	39	70
7	56	42	28	24	24	34	8.1	6.1	10	144	43	68
8	47	42	28	24	27	34	7.0	3.6	7.6	442	36	73
9	39	42	26	24	23	32	7.0	3.7	9.7	132	37	79
10	35	37	26	24	24	31	5.5	3.0	10	108	33	84
11	34	35	24	24	27	34	2.9	3.0	49	82	25	76
12	32	35	24	24	29	42	2.8	3.6	41	67	28	73
13	31	35	24	22	30	36	1.9	3.8	29	56	47	73
14	28	35	24	22	32	33	1.5	3.2	23	65	132	68
15	29	37	24	22	25	33	1.4	3.8	24	107	111	73
16	32	36	26	22	19	34	1.5	6.4	21	255	152	73
17	26	37	26	20	22	33	1.9	4.1	18	108	316	75
18	26	37	22	20	32	29	1.9	3.8	15	85	168	118
19	30	39	24	20	29	28	2.8	5.0	13	72	108	219
20	32	37	24	20	27	26	2.0	4.3	14	58	91	153
21	32	39	26	20	25	25	2.0	6.0	15	52	89	141
22	35	37	26	19	26	24	1.6	6.0	17	51	78	121
23	35	34	26	19	28	24	1.6	6.0	17	47	62	106
24	35	33	26	19	37	23	2.8	7.0	20	44	59	99
25	34	35	26	19	35	22	5.3	5.5	16	43	56	95
26	34	35	26	20	32	22	8.0	6.5	19	36	47	92
27	37	35	25	20	34	22	3.7	7.5	13	36	46	87
28	42	29	24	20	44	21	1.6	7.5	14	31	36	84
29	42	26	22	20	---	21	1.9	9.0	12	25	35	84
30	40	28	24	20	---	20	3.8	12	8.5	22	32	78
31	39	---	24	20	---	20	---	11	---	24	29	---
TOTAL	1206	1100	797	666	762	927	184.5	222.8	495.9	2279	2070	2613
MEAN	38.9	36.7	25.7	21.5	27.2	29.9	6.15	7.19	16.5	73.5	66.8	87.1
MAX	101	42	30	24	44	51	20	26	49	442	316	219
MIN	26	26	22	19	19	20	1.4	3.0	7.1	10	23	30
AC-FT	2390	2180	1580	1320	1510	1840	366	442	984	4520	4110	5180

CAL YR 1989 TOTAL 15301 MEAN 41.9 MAX 359 MIN 11 AC-FT 30350
WTR YR 1990 TOTAL 13323.2 MEAN 36.5 MAX 442 MIN 1.4 AC-FT 26430

09372000 MCELMO CREEK NEAR COLORADO-UTAH STATE LINE CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: November 1977 to September 1981, August 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	
NOV 29...	1020	26	2970	8.1	0.0	1600	330	190	210	2	
DEC 29...	1045	19	3010	8.4	0.0	1700	360	200	220	2	
FEB 21...	1050	26	3260	8.2	3.0	1600	300	200	250	3	
MAR 27...	1450	21	3340	8.5	15.0	1700	310	220	240	3	
APR 25...	1045	5.2	3640	8.3	13.0	1700	320	220	280	3	
MAY 09...	1040	3.2	3450	8.1	15.0	--	--	--	--	--	
JUN 22...	1105	22	2380	8.2	20.0	1200	260	140	170	2	
29...	0945	14	2860	8.0	20.0	1500	280	190	210	2	
JUL 13...	1130	56	1900	8.2	22.5	940	210	100	100	1	
16...	1500	263	2000	7.6	19.0	890	220	82	120	2	
AUG 15...	1040	92	2010	8.2	18.0	980	210	110	110	2	
SEP 04...	1050	47	2110	8.0	20.5	1000	220	110	120	2	
DATE		POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
NOV 29...	5.3	303	1700	38	0.4	11	2670	3.64	188	1.80	
DEC 29...	5.0	305	1700	41	0.4	12	2730	3.72	137	2.70	
FEB 21...	5.3	288	1800	52	0.4	11	2810	3.82	199	3.70	
MAR 27...	6.0	208	1900	33	--	--	2840	4.46	187	1.80	
APR 25...	13	310	1900	51	0.4	8.1	2980	4.05	41.7	0.40	
MAY 09...	--	--	--	--	--	--	--	--	--	--	
JUN 22...	6.9	284	1600	11	0.9	12	2370	3.23	141	0.20	
29...	8.8	299	1600	21	0.8	13	2500	3.40	94.6	<0.10	
JUL 13...	5.2	260	860	18	0.4	13	1460	1.99	221	0.50	
16...	8.6	150	1100	18	--	7.4	1650	2.33	1210	1.10	
AUG 15...	7.4	243	940	23	0.2	12	1560	2.12	388	0.80	
SEP 04...	7.2	258	930	21	0.3	12	1580	2.15	199	0.50	

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO

There are 24 tunnels or ditches, all of which are equipped with water-stage recorders and Parshall flumes or sharp-crested weirs. Records provided by Colorado Division of Water Resources. The locations and diversions of 8 selected diversions are given in the following list.

TO PLATTE RIVER BASIN

09010000 Grand River ditch diverts water from tributaries of Colorado River to La Poudre Pass Creek (tributary to Cache la Poudre River) in NW $\frac{1}{4}$ sec.21, T.6 N., R.75 W., in Platte River basin. Two collection ditches beginning at headgates located in sec.28, T.5 N., R.76 W., and sec.29, T.6 N., R.75 W., intercept all tributaries upstream on each side of the Colorado River and converge at La Poudre Pass.

REVISIONS (WATER YEARS).--WSP 1313: 1912-27.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09010000	0	0	0	0	0	0	0	1,080	12,700	5,730	1,260	215

Water year 1990, 20,980

09013000 Alva B. Adams tunnel diverts water from Grand Lake and Shadow Mountain Lake in NW $\frac{1}{4}$ sec.9, T.3 N., R.75 W., in Colorado River basin, to Lake Estes (Big Thompson River) in sec.30, T.5 N., R.72 W., in Platte River basin. For daily discharge, see elsewhere in this report.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09013000	27,670	31,910	33,290	32,750	29,890	16,380	4,540	9,850	3,340	9,990	7,030	7,260

Water year 1990, 213,900

09021500 Berthoud Pass ditch diverts water from tributaries of Fraser River between headgate in sec.33, T.2 S., R.75 W., and Berthoud Pass, in Colorado River basin, to Hoop Creek (tributary to West Fork Clear Creek) in sec.10, T.3 S., R.75 W., in Platte River basin.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09021500	0	0	0	0	0	0	0	0	226	277	78	42

Water year 1990, 623

09050590 Harold D. Roberts tunnel diverts water from Dillon Reservoir (Blue River) in sec.18, T.5 S., R.77 W., in Blue River basin, to North Fork South Platte River (tributary to South Platte River) in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.7 S., R.74 W., in Platte River basin. Figures include a small amount of ground-water inflow between Dillon Reservoir and east portal of tunnel.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09050590	67	7,620	7,940	5,480	3,650	530	0	567	8,010	20,410	5,340	0

Water year 1990, 59,620

TO ARKANSAS RIVER BASIN

09042000 Hoosier Pass tunnel diverts water from tributaries of Blue River in Colorado River basin to Montgomery Reservoir (Middle Fork South Platte River) in sec.14, T.8 S., R.78 W., in Platte River basin; this water is again diverted to South Catamount Creek (tributary to Catamount Creek) in SE $\frac{1}{4}$ sec.14, T.13 S., R.69 W., in the Arkansas River basin. Collection conduits extending from the right bank of Crystal Creek (tributary to Spruce Creek) in sec.14, T.7 S., R.78 W., right bank of Spruce Creek in sec.23, T.7 S., R.78 W., right bank of McCullough Gulch in sec.26, T.7 S., R.78 W., right bank of Monte Cristo Creek in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.8 S., R.78 W., left bank of Bemrose Creek in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.6, T.8 S., R.77 W., and intercepting intermediate tributaries, transport diversions to north portal of the tunnel.

REVISIONS (WATER YEARS).--WDR CO-86-1, WDR CO-86-2: 1984, 1985.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09042000	0	0	0	0	0	0	9.3	992	5,170	2,880	2,110	31

Water year 1990, 11,190

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO--Continued

TO ARKANSAS RIVER BASIN--Continued

09063700 Homestake tunnel diverts water from Homestake Lake (Middle Fork Homestake Creek), in sec.17, T.8 S., R.81 W., in Eagle River basin, to Lake Fork in sec.9, T.9 S., R.81 W., in Arkansas River basin. Water is imported to Homestake Lake from tributaries of Homestake Creek by collection conduits that extend from right bank of French Creek in sec.28, T.7 S., R.81 W., and left bank of East Fork Homestake Creek in sec.9, T.8 S., R.81 W., and intercept intermediate tributaries.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09063700	1,240	0	0	0	0	0	0	0	0	5,550	5,620	15,080
Water year 1990, 27,480												

09077160 Charles H. Bousted tunnel diverts water from the main stem and tributaries of Fryingpan River (tributary to Roaring Fork River), in Colorado River basin, to Lake Fork in sec.10, T.9 S., R.81 W., in Arkansas River basin. Water is transported to west portal of tunnel (at lat 39°14'44", long 106°31'47"), by a series of collection conduits extending between headgates on right bank of Sawyer Creek at lat 39°15'58", long 106°38'19" and right bank of Fryingpan River at lat 39°14'40", long 106°31'49", and intercepting intermediate tributaries.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09077160	0	0	0	0	0	0	60	7,840	33,880	5,230	123	134
Water year 1990, 47,270												

09077500 Busk-Ivanhoe tunnel diverts water from Ivanhoe Lake (Ivanhoe Creek), tributary to Fryingpan River in sec.13, T.9 S., R.82 W., in Roaring Fork River basin, to Busk Creek (tributary to Lake Fork) in sec. 20, T.9 S., R.81 W., in Arkansas River basin.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09077500	40	0	0	0	0	0	0	613	3,840	522	68	35
Water year 1990, 5,110												

TRANSMOUNTAIN DIVERSIONS NO LONGER PUBLISHED

Following is a list of Transmountain Diversions no longer being published in this report. Diversions, in acre-feet, for these sites are available from the State of Colorado, Division of Water Resources.

TO PLATTE RIVER BASIN	TO ARKANSAS RIVER BASIN	TO RIO GRANDE BASIN
09012000 Eureka ditch	09061500 Columbine ditch	09118200 Tarbell ditch
09022500 Moffat Water tunnel	09062000 Ewing ditch	09121000 Tabor ditch
		09341000 Treasure Pass ditch
09046000 Boreas Pass ditch	09062500 Wurtz ditch	09347000 Don LaFont ditches 1&2
09047300 Vidler tunnel	09073000 Twin Lakes tunnel	09348000 Williams Cr-Squaw Pass ditch
	09115000 Larkspur ditch	09351000 Pine River-Weminuche Pass ditch
		09351500 Weminuche Pass ditch

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in three tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and discharge at crest-stage stations; and the third is a table containing discharge measurements made at miscellaneous sites for both low flow and high flow are given in a fourth table.

LOW-FLOW PARTIAL-RECORD STATIONS

Measurements of streamflow in the area covered by this report made at low-flow, partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1990

Station no.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Discharge (ft ³ /s)
*09058900	Moniger Creek near Minturn, CO	Lat 39°43'37", long 106°28'50", in Eagle County, on left bank 1.5 mi upstream from mouth, 7.5 mi north of Minturn.	0.76	1965-90	6-21-90	0.91

*Also a crest-stage partial-record station.

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter.

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1990

Station no.	Station name	Location	Drainage area (mi ²)	Non-contributing	Period of record	Date	Gage height (feet)	Discharge (ft ³ /s)
PINEY RIVER BASIN								
*09058900	Moniger Creek near Minturn, CO	Lat 39°43'37", long 106°28'50", in Eagle County, on left bank 1.5 mi upstream from mouth, 7.5 mi north of Minturn.	0.76	-	1965-90	6-6-90	f 2.03	a
COLORADO RIVER BASIN								
09061450	Sweetwater Creek at mouth near Dotsero, CO	Lat 39°43'20", long 107°02'22", in NW¼NE¼ sec.9, T.4 S., R.86 W., Eagle County, 5.3 mi north of Dotsero.	105	-	1979-90	6-7-90	8.58	212
09091100	Mamm Creek near Silt, CO	Lat 39°43'54", long 107°42'48", in NW¼NW¼ sec.18, T.6 S., R.92 W., Garfield County, 3.3 mi southeast of Silt.	63.3	-	1979-90	7-26-90	10.79	210
GUNNISON RIVER BASIN								
09149450	Dry Creek near Olathe, CO	Lat 39°33'19", long 108°02'43", SW¼NE¼ sec. 36, T.50 N., R.11 W., Montrose County, 4.9 mi southwest of Olathe.	102	-	1979-90	5-5-90	0.90	56
SAN JUAN RIVER BASIN								
09361400	Junction Creek near Durango, CO	Lat 37°20'04", long 107°54'35", sec.36, T.36N., R.10 W., La Plata County, on left bank 4.5 mi upstream from mouth and 4.5 mi northwest of Durango.	26.3	-	1959-65, 1972, 1979-90	5-8-90	2.92	152

* Also a low-flow partial-record station.

a Not determined.

f Affected by backwater from ice.

401751107062000 UPPER FOIDEL CREEK PRECIPITATION GAGE, NEAR OAK CREEK, CO

LOCATION.--Lat 40°17'51", long 107°06'20", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T.5 N., R.87 W., Routt County, Hydrologic Unit 14050001, and 8.7 mi northwest of Oak Creek.

METEOROLOGICAL DATA

SITE.--Altitude is 8,050 ft above National Geodetic Vertical Datum of 1929, from topographic map.

SNOW-COURSE DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Depth (inches)	Water Content (inches)	Density (percent)
Jan. 19...	28.7	7.0	24.3
Feb. 23...	41.6	11.0	26.4
Mar. 13...	43.0	13.7	31.9

RAINFALL RECORDS

PERIOD OF RECORD.--January 1976 to current year.

INSTRUMENTATION.--Belfort weighing bucket rain-gage

REMARKS.--Unpublished rainfall data for water years 1976-86 are available in district office.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.07	.25	.00	.00	.00	.11	.00	.00	.00
2	.00	.00	.00	.00	1.15	.00	.00	.00	.00	.16	.00	.00
3	.00	.00	.00	.07	.00	.50	.00	.00	.00	.00	.00	.08
4	.00	.04	.00	.01	.00	.00	.19	.00	.00	.00	.00	.06
5	.00	.08	.00	.00	.00	.30	.00	.00	.00	.00	.00	.04
6	.00	.42	.08	.00	.00	.15	.00	.00	.00	.00	.00	.00
7	.00	.12	.00	.00	.00	.18	.00	.00	.00	.30	.00	.00
8	.00	.00	.00	.00	.05	.00	.00	.00	.00	.19	.00	.00
9	.00	.00	.33	.00	.20	.00	.10	.00	.00	.00	.00	.00
10	.00	.00	.04	.00	.25	.00	.00	.00	.00	.00	.00	.00
11	.15	.00	.02	.00	.00	.00	.00	.16	.61	.00	.00	.00
12	.00	.00	.02	.12	.00	.12	.00	.10	.42	.00	.00	.00
13	.00	.29	.10	.00	.50	.34	.00	.00	.03	.00	.00	.00
14	.00	.00	.31	.08	.55	.03	.00	.04	.00	.00	.00	.00
15	.00	.00	.14	.00	.00	.08	.00	.37	.00	.00	.26	.00
16	.00	.00	.14	.00	.00	.00	.00	.09	.00	.00	.00	.00
17	.00	.00	.19	.00	.10	.02	.04	.00	.00	.17	.10	.87
18	.00	.00	.81	.00	.15	.03	.00	.00	.00	.00	.00	.07
19	.00	.00	.61	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.62	.10	.00	.00	.00	.00	.00	.00	.08	.00
21	.21	.00	.09	.15	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.50	.00	.00	.02	.00	.00	.00	.00	.12	.00
23	.29	.00	.32	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.40	.00	.00	.00	.00	.23	.00	.00	.19	.00	.00
25	.00	.03	.00	.00	.00	.00	.21	.00	.00	.00	.00	.00
26	.20	.78	.00	.00	.00	.00	.33	.00	.00	.00	.00	.00
27	.20	.02	.00	.26	.00	.00	.07	.00	.00	.00	.00	.00
28	.00	.03	.00	.00	.00	.22	.51	.03	.00	.00	.00	.12
29	.00	.00	.19	.05	---	.07	.00	.19	.00	.00	.00	.02
30	.00	.00	.00	.21	---	.00	.00	.02	.00	.00	.00	.00
31	.00	---	.00	.25	---	.00	---	.00	---	.00	.00	---
TOTAL	1.05	2.21	4.51	1.37	3.20	2.06	1.68	1.00	1.17	1.01	0.56	1.26

WTR YR 1990 TOTAL 21.08

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09010500 COLORADO RIVER BELOW BAKER GULCH, NEAR GRAND LAKE, CO. (LAT 40 19 33N LONG 105 51 22W)									
OCT 1989					JUN 1990				
04...	1550	13.6	66	10.0	07...	1510	310	45	9.5
NOV					JUL				
08...	1405	12.1	69	0.0	11...	1750	71.1	60	14.0
DEC					AUG				
21...	1055	8.07	74	0.0	01...	0920	24.6	69	9.5
FEB 1990					30...	0910	10.6	76	11.0
23...	1345	6.81	72	0.0	SEP				
MAR					26...	1745	19.5	76	12.5
27...	1445	6.96	69	0.0					
MAY									
10...	1115	55.7	56	3.5					
09019500 COLORADO RIVER NEAR GRANBY, CO. (LAT 40 07 15N LONG 105 54 00W)									
OCT 1989					JUL 1990				
05...	0940	13.6	77	6.0	12...	1010	70.5	66	12.0
APR 1990					31...	1735	78.0	63	14.5
05...	1425	22.5	70	--	AUG				
MAY					30...	1200	39.2	68	12.0
09...	1710	71.6	62	6.0	SEP				
JUN					26...	1510	20.8	70	14.0
06...	1750	71.4	70	15.5					
09022000 FRASER RIVER AT UPPER STATION, NEAR WINTER PARK, CO. (LAT 39 50 45N LONG 105 45 05W)									
OCT 1989					JUN 1990				
03...	1050	4.81	72	2.5	05...	1120	55.8	60	4.0
NOV					JUL				
06...	1105	3.36	78	0.0	10...	1130	23.2	54	8.0
DEC					AUG				
19...	1045	2.34	80	0.0	02...	1345	9.69	68	8.5
FEB 1990					28...	1110	7.81	63	6.5
21...	1120	1.78	96	0.0	SEP				
MAR					28...	1315	8.98	77	7.5
26...	1125	3.91	130	0.0					
MAY									
08...	1130	7.31	113	2.0					
09024000 FRASER RIVER NEAR WINTER PARK, CO. (LAT 39 54 00N LONG 105 46 34W)									
OCT 1989					JUN 1990				
03...	1300	5.85	80	8.0	05...	1250	18.7	62	10.5
NOV					JUL				
06...	1245	4.36	90	0.5	10...	1355	42.5	60	10.5
DEC					AUG				
19...	1250	5.05	103	0.0	02...	1315	11.0	75	12.5
FEB 1990					28...	1300	10.7	81	11.5
21...	1305	3.56	125	0.0	SEP				
MAR					28...	1130	6.56	93	7.5
26...	1245	4.28	145	5.0					
MAY									
08...	1330	9.80	102	5.5					
09025000 VASQUEZ CREEK AT WINTER PARK, CO. (LAT 39 55 13N LONG 105 47 05W)									
OCT 1989					JUN 1990				
04...	0905	4.97	54	5.0	06...	1100	10.3	44	5.5
NOV					JUL				
06...	1415	4.48	50	0.0	11...	0905	54.8	36	6.0
DEC					AUG				
20...	0930	5.79	47	0.0	02...	0900	10.9	49	8.0
FEB 1990					29...	0730	11.4	52	7.0
22...	0935	3.86	62	0.0	SEP				
MAR					28...	0830	6.17	49	6.0
27...	0855	2.62	61	0.0					
MAY									
09...	0925	10.1	55	0.5					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09025400 ELK CREEK NEAR FRASER, CO. (LAT 39 55 09N LONG 105 49 31W)									
OCT 1989					JUN 1990				
05...	1130	0.880	53	4.0	07...	0915	1.25	44	6.5
NOV					JUL				
07...	1240	0.270	51	0.0	11...	1140	2.10	48	12.0
DEC					AUG				
20...	1320	0.390	57	0.0	02...	1115	0.830	51	10.0
FEB 1990					29...	1645	0.520	51	16.5
22...	1105	0.290	70	0.0	SEP				
MAR					27...	1450	0.730	56	12.0
27...	1035	0.620	60	0.0					
MAY									
09...	1050	2.79	43	1.0					
09026500 ST. LOUIS CREEK NEAR FRASER, CO. (LAT 39 54 36N LONG 105 52 40W)									
OCT 1989					JUN 1990				
05...	1335	6.37	73	4.5	07...	1110	28.1	76	5.5
NOV					JUL				
07...	0915	6.85	92	0.0	11...	1330	52.2	62	10.5
DEC					AUG				
20...	1510	5.88	85	0.0	01...	1310	19.3	73	10.0
FEB 1990					29...	1600	10.8	76	14.5
22...	1450	5.33	75	0.0	SEP				
MAR					27...	1705	7.51	90	9.5
27...	1225	6.48	84	0.5					
MAY									
08...	1550	10.8	63	3.0					
09032000 RANCH CREEK NEAR FRASER, CO. (LAT 39 57 00N LONG 105 45 54W)									
OCT 1989					MAY 1990				
03...	1630	5.93	46	7.0	09...	1430	7.25	44	4.0
NOV					JUN				
07...	1040	5.57	49	0.0	05...	1420	8.78	44	--
DEC					JUL				
20...	1045	4.22	50	0.0	10...	1520	18.2	38	10.5
FEB 1990					AUG				
22...	1240	3.25	55	0.0	01...	1440	5.00	42	10.5
MAR					28...	1515	2.95	49	11.5
26...	1750	3.42	50	0.5					
09032100 CABIN CREEK NEAR FRASER, CO. (LAT 39 59 09N LONG 105 44 40W)									
OCT 1989					MAY 1990				
05...	1525	1.61	46	6.5	07...	1400	2.37	34	3.5
NOV					09...	1325	2.30	33	0.0
06...	1530	1.82	46	0.0	JUN				
DEC					05...	1515	26.7	36	9.0
19...	1530	1.14	47	0.0	JUL				
FEB 1990					10...	1740	9.49	38	13.0
21...	1600	0.900	58	0.0	AUG				
MAR					01...	1610	4.94	43	13.5
26...	1600	1.14	44	0.0	28...	1800	2.85	49	14.5
09034250 COLORADO RIVER AT WINDY GAP, NEAR GRANBY, CO. (LAT 40 06 30N LONG 106 00 13W)									
OCT 1989					APR 1990				
03...	1115	M55.7	142	10.5	17...	1910	M184	143	8.0
NOV					MAY				
07...	1235	M85.7	162	3.5	11...	1200	M225	116	9.0
DEC					JUN				
13...	1015	M58.7	145	0.0	20...	1345	M126	135	17.5
JAN 1990					JUL				
30...	1735	M62.3	135	0.5	23...	1645	M273	148	14.5
FEB					AUG				
28...	0915	M63.1	139	0.0	29...	1330	M103	122	18.5
MAR					SEP				
27...	1650	M126	163	2.5	26...	1325	M84.7	143	15.0

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09034900 BOBTAIL CREEK NEAR JONES PASS, CO. (LAT 39 45 37N LONG 105 54 21W)									
OCT 1989					APR 1990				
24...	1400	3.67	69	1.5	18...	1340	1.19	72	0.5
DEC					JUN				
06...	1210	1.07	62	0.0	18...	1415	64.3	--	7.5
JAN 1990					JUL				
17...	1200	0.760	69	0.0	30...	1435	7.19	72	--
MAR					AUG				
13...	1225	0.670	73	0.0	27...	1715	4.49	58	13.0
09035500 WILLIAMS FORK BELOW STEELMAN CREEK, CO. (LAT 39 46 44N LONG 105 55 40W)									
OCT 1989					APR 1990				
24...	1145	0.660	77	0.5	18...	1335	1.03	79	1.0
DEC					JUL				
06...	1240	0.480	53	1.0	30...	1135	23.0	53	7.0
JAN 1990					AUG				
17...	1245	0.570	44	0.5	27...	1210	0.820	80	8.5
MAR									
13...	1245	0.550	83	0.5					
09035700 WILLIAMS FORK ABOVE DARLING CREEK, NEAR LEAL, CO. (LAT 39 47 22N LONG 106 01 18W)									
OCT 1989					MAY 1990				
12...	1030	9.00	56	2.5	22...	0955	25.0	52	4.0
NOV					JUN				
20...	1345	5.10	64	0.5	20...	1030	87.0	32	4.5
JAN 1990					JUL				
17...	1245	4.08	65	0.0	19...	1020	53.0	41	8.0
FEB					AUG				
22...	1100	3.69	71	0.0	22...	1030	14.5	51	9.5
APR					SEP				
06...	1040	7.31	70	0.0	19...	1045	9.50	54	7.0
09035800 DARLING CREEK NEAR LEAL, CO. (LAT 39 48 17N LONG 106 01 11W)									
OCT 1989					MAY 1990				
13...	1120	3.30	69	1.0	22...	1350	9.30	65	3.5
NOV					JUN				
20...	1520	1.95	69	0.5	21...	1115	36.5	37	2.5
JAN 1990					JUL				
18...	1035	1.40	74	0.0	20...	1130	9.40	52	6.5
FEB					AUG				
22...	1420	1.950	74	0.0	23...	1100	4.70	60	7.5
APR					SEP				
11...	1230	1.84	78	1.5	20...	1140	3.30	68	3.0
09035900 SOUTH FORK OF WILLIAMS FORK NEAR LEAL, CO. (LAT 39 47 44N LONG 106 01 49W)									
OCT 1989					MAY 1990				
12...	1245	11.3	76	2.5	22...	1120	41.4	64	3.5
NOV					JUN				
20...	1240	9.76	81	0.0	20...	1230	144	37	4.0
JAN 1990					JUL				
17...	1530	12.7	80	0.0	19...	1240	37.0	53	8.0
FEB					AUG				
22...	1310	6.86	90	0.0	22...	1245	18.7	67	8.5
APR					SEP				
06...	1245	6.10	90	2.0	19...	1245	15.0	68	6.0

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09036000 WILLIAMS FORK NEAR LEAL, CO. (LAT 39 49 53N LONG 106 03 15W)									
OCT 1989					JUN 1990				
12...	1500	24.4	70	6.0	20...	1530	340	40	8.0
NOV					JUL				
21...	1035	20.9	75	2.0	19...	1455	121	50	11.5
JAN 1990					AUG				
18...	1230	15.9	80	0.0	22...	1510	47.0	66	12.5
FEB					SEP				
21...	1625	15.2	85	0.0	19...	1510	35.5	66	9.5
APR									
05...	1755	20.9	82	2.5					
09037500 WILLIAMS FORK NEAR PARSHALL, CO. (LAT 40 00 01N LONG 106 10 45W)									
OCT 1989					JUN 1990				
02...	1740	32.7	109	12.0	13...	1745	365	54	12.0
NOV					JUL				
21...	1230	40.2	96	0.5	13...	1220	24.6	94	16.0
JAN 1990					AUG				
18...	1450	33.1	98	0.0	08...	1605	11.4	111	19.5
FEB					SEP				
21...	1450	24.3	104	0.0	12...	1550	10.1	114	18.5
APR					25...	1640	32.5	104	15.0
05...	1600	37.7	101	3.0					
MAY									
21...	1545	69.9	--	13.0					
09038500 WILLIAMS FORK BELOW WILLIAMS FORK RESERVOIR, CO. (LAT 40 02 07N LONG 106 12 17W)									
OCT 1989					JUN 1990				
02...	1600	111	123	10.0	13...	1415	15.0	132	8.0
NOV					JUL				
21...	1355	117	125	5.5	13...	1430	24.1	131	8.0
FEB 1990					AUG				
21...	1310	16.5	146	4.0	09...	1640	172	127	8.5
APR					SEP				
05...	1430	15.5	153	4.0	13...	0945	106	123	9.5
MAY					26...	1600	108	122	10.0
21...	1725	16.2	128	6.5					
09039000 TROUBLESOME CREEK NEAR PEARMONT, CO. (LAT 40 13 03N LONG 106 18 45W)									
OCT 1989					JUN 1990				
04...	1235	12.3	94	8.5	06...	1445	83.0	74	13.0
NOV					JUL				
08...	1125	13.6	74	0.0	12...	1250	18.9	92	14.5
DEC					31...	1455	17.8	98	16.5
21...	1250	8.80	84	0.0	AUG				
FEB 1990					30...	1405	11.4	108	13.0
23...	1040	10.1	92	0.0	SEP				
MAR					25...	1610	10.6	110	14.5
28...	1210	13.5	85	2.5					
MAY									
10...	1510	23.6	91	9.5					
09046490 BLUE RIVER AT BLUE RIVER, CO. (LAT 39 27 21N LONG 106 01 52W)									
OCT 1989					MAY 1990				
18...	0945	14.2	75	3.0	23...	0930	46.3	75	10.0
NOV					JUN				
17...	0950	9.51	70	1.0	28...	1245	35.3	45	8.0
DEC					JUL				
18...	1135	9.60	40	1.0	10...	1150	29.4	120	15.0
JAN 1990					AUG				
22...	1500	7.14	80	2.0	08...	1545	23.0	85	10.0
FEB					SEP				
28...	1045	4.39	40	2.0	24...	1540	23.7	80	7.0
MAR					24...	1620	23.7	80	7.0
28...	1305	5.55	60	2.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09046600 BLUE RIVER NEAR DILLON, CO. (LAT 39 32 55N LONG 106 02 19W)									
OCT 1989					APR 1990				
18...	1150	50.7	75	3.0	10...	1550	29.1	175	7.0
NOV					MAY				
16...	1505	39.8	90	2.0	23...	1250	125	125	6.0
DEC					JUN				
19...	1015	25.0	60	2.0	28...	1050	185	110	8.0
JAN 1990					JUL				
26...	1050	24.1	90	1.0	10...	0910	141	160	13.0
FEB					AUG				
28...	1440	20.5	200	5.0	06...	1715	74.6	80	8.0
MAR					SEP				
30...	1210	24.5	220	4.0	24...	1410	66.3	85	7.0
09047500 SNAKE RIVER NEAR MONTEZUMA, CO. (LAT 39 36 20N LONG 105 56 33W)									
OCT 1989					MAY 1990				
16...	1350	25.0	50	2.0	24...	1025	104	110	4.0
NOV					JUN				
15...	1605	19.1	45	0.0	28...	1550	182	85	7.0
DEC					JUL				
19...	1330	15.9	50	0.0	11...	0855	147	75	8.0
JAN 1990					AUG				
24...	1140	12.5	60	0.0	06...	1105	49.2	80	7.0
MAR					SEP				
02...	0830	9.43	80	0.0	24...	1050	31.9	80	6.0
30...	1010	12.6	65	1.0					
APR									
12...	1645	12.3	150	2.0					
09047700 KEYSTONE GULCH NEAR DILLON, CO. (LAT 39 35 40N LONG 105 58 19W)									
OCT 1989					MAY 1990				
16...	1150	3.32	40	1.0	23...	1440	9.90	70	7.0
NOV					JUN				
15...	1220	2.50	30	0.0	28...	1435	12.1	75	8.0
DEC					JUL				
18...	1405	2.82	35	0.0	10...	1345	10.0	85	13.0
JAN 1990					AUG				
24...	1405	1.86	40	0.0	06...	1345	5.84	50	9.0
MAR					SEP				
02...	1030	1.81	35	0.0	24...	1225	3.74	60	6.0
28...	1500	2.20	40	0.0					
APR									
12...	1445	2.34	50	1.0					
09050100 TENMILE CREEK BELOW NORTH TENMILE CREEK, AT FRISCO, CO. (LAT 39 34 37N LONG 106 06 33W)									
OCT 1989					MAY 1990				
18...	1400	20.7	497	4.0	18...	0825	105	489	6.0
NOV					JUN				
15...	1510	19.9	396	0.5	14...	1100	529	547	7.0
DEC					JUL				
11...	1600	20.6	641	0.5	19...	1150	104	376	6.0
JAN 1990					AUG				
23...	1510	21.2	335	0.0	16...	0855	54.5	411	7.5
MAR					SEP				
15...	0950	15.7	868	0.5	14...	0825	26.3	518	7.0
APR									
19...	1400	48.7	923	--					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09050700 BLUE RIVER BELOW DILLON, CO. (LAT 39 37 32N LONG 106 03 57W)									
OCT 1989					MAY 1990				
18...	1200	M104	217	6.0	18...	1035	100	260	4.5
NOV					JUN				
15...	1250	100	200	6.5	14...	1500	1260	227	11.5
DEC					JUL				
14...	0900	103	184	4.5	19...	1410	49.5	261	5.0
JAN 1990					AUG				
24...	1020	102	133	3.0	16...	1330	99.9	223	5.5
MAR					SEP				
15...	1250	102	261	3.5	14...	1020	104	242	5.5
APR									
19...	1600	196	231	--					
09051050 STRAIGHT CREEK BELOW LASKEY GULCH NEAR DILLON, CO. (LAT 39 38 23N LONG 106 02 23W)									
OCT 1989					MAY 1990				
18...	1045	M2.27	113	1.5	18...	1256	6.83	262	8.5
NOV					JUN				
15...	0955	3.74	51	0.5	15...	1000	76.6	76	4.0
DEC					JUL				
13...	1540	4.90	108	0.5	19...	1650	21.4	85	10.5
JAN 1990					AUG				
24...	1240	4.29	103	0.0	16...	1506	11.4	98	10.0
MAR					SEP				
15...	1445	3.50	184	0.5	14...	1105	5.59	125	9.0
APR									
20...	1500	7.80	219	--					
09052000 ROCK CREEK NEAR DILLON, CO. (LAT 39 43 23N LONG 106 07 41W)									
OCT 1989					MAY 1990				
26...	1145	7.34	50	1.0	22...	1445	32.5	80	5.0
NOV					JUN				
13...	1250	5.92	60	0.0	13...	1010	87.6	110	7.0
DEC					JUL				
11...	1320	7.20	40	0.0	11...	1450	42.1	90	14.0
JAN 1990					AUG				
24...	0905	2.46	40	0.0	09...	1325	16.1	65	8.0
MAR					SEP				
01...	1530	3.56	35	0.0	28...	1035	11.1	55	6.0
26...	1610	6.37	40	0.0					
APR									
11...	1630	7.1	45	2.0					
09052400 BOULDER CREEK AT UPPER STATION, NEAR DILLON, CO. (LAT 39 43 41N LONG 106 10 22W)									
OCT 1989					MAY 1990				
17...	1410	3.95	35	1.0	21...	1610	15.3	90	5.0
NOV					JUN				
13...	1430	2.66	40	0.0	13...	1425	59.9	110	7.0
DEC					JUL				
11...	1540	4.25	30	0.0	11...	1245	34.9	85	15.0
JAN 1990					AUG				
22...	1310	2.65	40	0.0	07...	1050	12.3	65	7.0
MAR					SEP				
01...	1315	2.78	60	0.0	25...	1105	5.26	60	7.0
26...	1440	1.96	40	1.0					
APR									
11...	1610	1.84	40	0.5					
09052800 SLATE CREEK AT UPPER STATION, NEAR DILLON, CO. (LAT 39 45 47N LONG 106 11 31W)									
OCT 1989					APR 1990				
25...	1000	4.93	40	1.0	11...	1140	5.98	45	1.0
NOV					MAY				
14...	0850	4.16	40	0.0	31...	1330	80.8	80	7.0
DEC					JUN				
12...	0950	4.81	50	0.0	12...	1010	141	110	6.0
JAN 1990					JUL				
25...	1120	1.37	40	0.0	12...	1030	52.0	85	13.0
FEB					AUG				
26...	1130	4.72	40	0.0	09...	0945	16.5	65	7.0
MAR					SEP				
29...	1115	5.10	50	0.0	27...	0950	15.8	55	6.0

MISCELLANEOUS STATION ANALYSES

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09054000 BLACK CREEK BELOW BLACK LAKE, NEAR DILLON, CO. (LAT 39 47 57N LONG 106 16 04W)									
OCT 1989					MAY 1990				
24...	1035	5.46	50	2.0	21...	1345	24.4	80	6.0
NOV					JUN				
14...	1230	4.15	30	1.0	12...	1345	186	120	7.0
DEC					JUL				
13...	1010	3.90	50	1.0	12...	1450	59.0	90	15.0
JAN 1990					AUG				
23...	1450	2.94	35	0.0	08...	0935	24.7	85	8.0
FEB					SEP				
27...	1025	1.87	40	0.0	27...	1415	11.3	75	7.0
MAR									
27...	1140	2.66	60	1.0					
09055300 CATARACT CREEK NEAR KREMMLING, CO. (LAT 39 50 07N LONG 106 18 57W)									
OCT 1989					APR 1990				
25...	1320	1.52	45	2.0	10...	1250	3.18	40	1.0
NOV					MAY				
14...	1520	1.88	40	2.0	21...	1150	20	80	6.0
DEC					JUN				
13...	1405	1.79	50	0.0	11...	1040	163	90	6.0
JAN 1990					JUL				
23...	1050	0.580	35	1.0	09...	1030	68.0	110	15.0
FEB					AUG				
26...	1340	0.820	30	0.0	08...	1345	5.51	60	10.0
MAR					SEP				
27...	1315	1.17	50	1.0	26...	1115	1.89	60	6.0
09057500 BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR, CO. (LAT 39 52 49N LONG 106 20 00W)									
OCT 1989					MAY 1990				
24...	1255	454	120	2.0	15...	1235	73.2	175	7.0
NOV					22...	0910	53	120	7.0
02...	1045	215	180	2.0	JUN				
DEC					11...	1305	58.3	180	8.0
11...	1115	169	140	2.5	JUL				
JAN 1990					09...	1155	85.2	120	10.0
22...	1115	233	120	2.0					
MAR									
01...	1105	172	150	4.0					
26...	1145	181	240	4.0					
09057520 BLUE RIVER BELOW SPRUCE CREEK NEAR KREMMLING, CO. (LAT 39 57 49N LONG 106 21 35W)									
OCT 1989					MAY 1990				
17...	0910	703	150	5.0	09...	1320	78.6	150	7.0
17...	1020	703	150	5.0	22...	1210	17.2	320	7.0
NOV					JUN				
02...	1350	212	140	3.0	11...	1445	37.1	240	7.0
DEC					11...	1550	62.8	180	7.0
12...	1530	183	120	1.5	JUL				
JAN 1990					09...	1445	64.7	200	15.0
25...	1455	206	150	1.5	AUG				
FEB					07...	1550	449	145	9.0
27...	1315	182	170	4.0	SEP				
MAR					26...	1545	295	120	7.0
29...	1415	247	150	6.0					
09058500 PINEY RIVER BELOW PINEY LAKE, NEAR MINTURN, CO. (LAT 39 42 29N LONG 106 25 38W)									
OCT 1989					APR 1990				
12...	1436	2.08	--	7.0	18...	1545	16.2	77	5.0
NOV					MAY				
14...	1240	3.83	47	0.5	22...	1205	40.8	48	8.5
JAN 1990					JUN				
04...	1145	1.70	65	0.0	06...	1555	180	27	7.0
FEB					JUL				
14...	1205	1.50	66	0.5	17...	1255	19.6	29	17.5
MAR					SEP				
20...	1335	1.71	73	0.5	25...	1330	3.49	55	9.5

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09058610 DICKSON CREEK NEAR VAIL, CO. (LAT 39 42 14N LONG 106 27 25W)									
OCT 1989					MAY 1990				
12...	1155	0.450	--	7.5	22...	1421	5.23	304	10.5
NOV					JUN				
13...	1534	0.730	400	4.0	06...	1400	8.81	255	--
JAN 1990					21...	1412	4.00	339	13.0
04...	1323	0.700	411	0.0	JUL				
FEB					17...	1642	1.73	356	18.0
14...	1403	0.860	410	0.5	AUG				
MAR					14...	1440	1.52	310	14.5
20...	1103	0.650	420	0.5	SEP				
APR					25...	1610	1.35	400	12.0
17...	1305	1.84	338	3.0					
09058700 FREEMAN CREEK NEAR MINTURN, CO. (LAT 39 41 55N LONG 106 26 41W)									
OCT 1989					JUN 1990				
12...	1250	0.220	--	5.5	06...	1840	3.18	130	13.0
NOV					JUL				
13...	1642	0.160	229	0.5	17...	1530	0.340	205	19.0
APR 1990					AUG				
17...	1147	0.550	178	1.0	16...	1525	0.060	200	13.5
MAY					SEP				
22...	1625	13.2	76	3.0	25...	1735	0.060	246	10.0
09058800 EAST MEADOW CREEK NEAR MINTURN CO. (LAT 39 43 54N LONG 106 25 36W)									
OCT 1989					JUL 1990				
13...	1021	0.720	70	1.5	17...	1105	2.47	50	8.5
NOV					AUG				
14...	1032	0.610	64	0.5	14...	0835	1.14	55	8.5
APR 1990					SEP				
18...	1202	1.30	84	1.0	25...	1110	0.720	72	4.5
JUN									
06...	1120	23.1	35	4.0					
09058900 MONIGER CREEK NEAR MINTURN, CO. (LAT 39 43 37N LONG 106 28 50W)									
JUN 1990									
21...	1242	0.910	113	8.0					
09059500 PINEY RIVER NEAR STATE BRIDGE, CO. (LAT 39 48 00N LONG 106 35 00W)									
OCT 1989					JUN 1990				
11...	1425	9.89	414	9.5	05...	1015	463	103	7.0
NOV					26...	0935	140	117	11.0
14...	1535	13.6	389	1.5	JUL				
DEC					31...	1420	24.4	274	11.5
12...	1345	15.8	328	0.0	AUG				
JAN 1990					21...	0925	18.0	320	11.0
30...	1435	10.6	405	0.0	SEP				
MAR					25...	0935	11.7	--	8.0
20...	1600	15.6	445	5.0					
APR									
18...	0955	55.1	260	4.0					
09063000 EAGLE RIVER AT RED CLIFF, CO. (LAT 39 30 34N LONG 106 22 00W)									
OCT 1989					MAY 1990				
11...	1317	10.8	222	8.5	21...	1517	52.9	176	11.0
NOV					JUN				
15...	1512	12.5	229	0.5	08...	1140	198	122	8.0
JAN 1990					20...	1410	75.9	163	12.5
02...	1705	13.0	228	0.0	JUL				
FEB					16...	1720	24.9	208	12.0
15...	1108	7.50	238	0.5	AUG				
MAR					15...	1110	15.5	220	11.0
19...	1617	9.27	236	4.0	SEP				
APR					24...	1850	11.0	262	11.5
19...	1413	27.5	186	8.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09063200 WEARYMAN CREEK NEAR RED CLIFF, CO. (LAT 39 31 14N LONG 106 19 06W)									
OCT 1989					MAY 1990				
11...	1049	2.41	--	2.5	23...	1805	10.7	258	6.0
NOV					JUN				
15...	1320	1.72	288	0.0	07...	1827	45.7	165	5.5
JAN 1990					20...	1112	--	204	5.0
03...	1516	1.94	288	0.0	JUL				
FEB					18...	1222	7.89	243	7.5
13...	1630	1.39	295	0.5	AUG				
MAR					15...	0810	5.16	220	6.0
21...	1543	2.06	256	0.5	SEP				
APR					24...	1640	3.31	296	6.0
16...	1715	1.58	299	2.5					
09063400 TURKEY CREEK NEAR RED CLIFF, CO. (LAT 39 31 32N LONG 106 20 08W)									
OCT 1989					MAY 1990				
11...	1206	5.43	274	3.5	24...	1007	48.3	220	4.5
NOV					JUN				
15...	1443	6.31	287	0.0	07...	1000	66.5	144	6.0
JAN 1990					20...	1235	77.8	173	6.5
03...	1715	5.13	290	0.0	JUL				
FEB					18...	1328	18.1	232	9.0
13...	1710	3.11	309	0.5	AUG				
MAR					15...	0940	11.7	215	8.0
21...	1630	6.20	281	0.5	SEP				
APR					24...	1525	5.52	292	8.5
19...	1042	8.01	274	3.0					
09063900 MISSOURI CREEK NEAR GOLD PARK, CO. (LAT 39 23 25N LONG 106 28 10W)									
OCT 1989					MAY 1990				
10...	1555	1.54	34	6.5	23...	1142	15.0	43	3.0
NOV					JUN				
14...	1540	MO.78	32	0.5	07...	1340	27.6	21	7.0
JAN 1990					19...	1713	24.6	18	7.5
03...	1045	0.530	37	0.5	JUL				
FEB					18...	1515	11.0	23	11.5
13...	1148	0.380	39	0.0	AUG				
MAR					16...	0820	5.64	25	8.0
21...	1152	0.500	40	1.0	SEP				
APR					26...	1120	3.36	37	7.0
19...	1410	3.41	32	1.0					
09064000 HOMESTAKE CREEK AT GOLD PARK, CO. (LAT 39 24 20N LONG 106 25 58W)									
OCT 1989					MAY 1990				
10...	1748	5.77	43	8.0	23...	1433	49.8	28	8.5
NOV					JUN				
15...	1044	4.37	30	0.0	07...	1515	92.1	24	9.5
JAN 1990					19...	1852	46.7	21	10.5
03...	1235	3.62	32	0.0	JUL				
FEB					18...	1655	37.6	23	13.0
13...	1312	2.78	32	0.0	AUG				
MAR					16...	1005	19.3	30	8.5
21...	1257	3.77	33	1.0	SEP				
APR					26...	1255	14.5	37	11.0
19...	1600	21.2	33	3.0					
09064500 HOMESTAKE CREEK NEAR RED CLIFF, CO. (LAT 39 28 24N LONG 106 22 02W)									
OCT 1989					MAY 1990				
10...	1858	7.60	43	9.0	23...	1612	72.6	28	11.5
NOV					JUN				
15...	1153	8.63	41	0.5	07...	1642	119	23	13.0
JAN 1990					19...	1600	47.4	22	10.0
03...	1336	5.20	46	0.0	JUL				
FEB					18...	1840	36.7	27	14.0
13...	1430	4.44	42	1.0	AUG				
MAR					16...	1145	17.2	30	11.5
21...	1415	10.2	--	1.5	SEP				
APR					26...	1520	20.3	41	12.5
19...	1237	33.2	35	6.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09064600 EAGLE RIVER NEAR MINTURN, CO. (LAT 39 33 14N LONG 106 24 07W)									
OCT 1989					MAY 1990				
11...	1458	28.0	311	--	16...	1348	167	171	5.5
NOV					21...	1708	192	158	10.5
16...	1035	11.4	252	0.0	JUN				
JAN 1990					08...	1410	666	151	9.0
05...	1210	18.6	368	0.0	13...	0940	490	117	5.5
FEB					20...	1550	258	142	12.5
12...	1720	23.8	345	0.5	JUL				
MAR					19...	1550	132	136	12.5
20...	1700	29.8	343	2.5	AUG				
APR					15...	1350	53.2	210	13.0
19...	1543	102	188	8.5					
09065100 CROSS CREEK NEAR MINTURN, CO. (LAT 39 34 05N LONG 106 24 45W)									
OCT 1989					MAY 1990				
11...	1612	6.49	47	10.5	24...	1126	169	23	5.5
NOV					JUN				
16...	1133	3.54	56	0.0	12...	1605	342	17	8.5
JAN 1990					13...	1100	206	20	7.5
04...	1652	2.90	59	0.0	20...	1730	151	18	11.0
FEB					JUL				
15...	1242	3.09	64	0.0	19...	1230	80.3	24	13.0
MAR					AUG				
22...	1030	6.01	59	1.0	15...	1540	13.5	40	14.0
APR									
20...	1025	24.0	42	8.5					
09065500 GORE CREEK AT UPPER STATION, NEAR MINTURN, CO. (LAT 39 37 40N LONG 106 16 24W)									
OCT 1989					MAY 1990				
11...	1450	5.10	61	4.0	22...	1530	53.6	36	4.0
NOV					JUN				
09...	1530	3.10	65	0.0	19...	1550	149	26	7.0
DEC					JUL				
20...	1515	3.10	67	0.0	17...	1340	27.6	38	10.0
FEB 1990					AUG				
01...	1510	2.80	70	0.0	21...	1550	12.0	46	10.5
MAR					SEP				
12...	1230	2.40	74	0.0	18...	1600	9.00	54	6.5
APR									
26...	1520	18.0	48	0.5					
09066000 BLACK GORE CREEK NEAR MINTURN, CO. (LAT 39 35 47N LONG 106 15 52W)									
OCT 1989					MAY 1990				
11...	1040	2.44	160	2.5	22...	1015	38.1	128	2.0
NOV					JUN				
09...	1120	2.44	188	0.0	19...	1020	53.9	77	4.0
DEC					JUL				
18...	1500	2.10	171	0.0	18...	1030	9.56	125	7.5
FEB 1990					AUG				
02...	1210	2.24	186	0.0	21...	1100	4.69	155	9.0
MAR					SEP				
13...	1500	2.00	179	0.0	18...	0940	3.30	156	4.0
APR									
12...	1045	5.50	60	2.0					
26...	1050	8.90	274	5.0					
09066100 BIGHORN CREEK NEAR MINTURN, CO. (LAT 39 38 24N LONG 106 17 34W)									
OCT 1989					MAY 1990				
11...	1320	1.30	61	4.0	21...	1450	11.0	44	5.0
NOV					JUN				
09...	1315	1.14	69	0.5	19...	1350	53.0	34	4.5
DEC					JUL				
20...	1240	0.910	71	0.0	18...	1600	8.00	40	8.5
FEB 1990					AUG				
01...	1210	0.800	74	0.0	21...	1400	2.90	52	9.0
MAR					SEP				
13...	1020	0.790	71	0.0	18...	1425	2.75	53	6.5
APR									
25...	1440	6.40	49	2.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09066150 PITKIN CREEK NEAR MINTURN, CO. (LAT 39 38 37N LONG 106 18 07W)									
OCT 1989					MAY 1990				
11...	1155	2.46	81	3.0	22...	1200	13.3	48	2.5
NOV					JUN				
09...	1210	2.24	81	1.0	19...	1215	43.2	32	4.0
DEC					JUL				
19...	1450	1.98	80	0.0	17...	1600	12.5	43	9.0
FEB 1990					AUG				
01...	1000	1.60	87	0.0	21...	1230	5.30	58	10.0
MAR					SEP				
12...	1325	1.40	90	0.5	17...	1425	5.10	61	5.5
APR									
25...	1205	8.00	60	2.0					
09066200 BOOTH CREEK NEAR MINTURN, CO. (LAT 39 39 02N LONG 106 19 16W)									
OCT 1989					MAY 1990				
10...	1445	0.760	134	9.0	22...	1400	21.7	73	4.5
NOV					JUN				
08...	1450	1.19	120	2.5	18...	1250	49.4	36	7.0
DEC					JUL				
19...	1310	1.62	104	0.0	18...	1415	6.30	63	10.0
JAN 1990					AUG				
31...	1510	0.690	140	0.0	20...	1600	2.88	82	9.0
MAR					SEP				
14...	1510	1.37	132	0.0	18...	1200	2.24	96	8.0
APR									
27...	1215	6.80	108	1.0					
09066300 MIDDLE CREEK NEAR MINTURN, CO. (LAT 39 38 50N LONG 106 22 48W)									
OCT 1989					MAY 1990				
10...	1005	0.340	198	3.0	21...	1010	2.88	191	1.5
NOV					JUN				
08...	1030	0.450	200	1.0	18...	1645	27.0	79	7.0
DEC					JUL				
19...	1045	0.390	212	0.0	17...	1115	3.65	122	7.0
JAN 1990					AUG				
31...	1005	0.420	225	0.0	20...	1110	1.61	148	7.5
MAR					SEP				
14...	1000	0.150	251	0.0	17...	1130	0.970	178	6.5
APR									
27...	1020	1.11	193	0.0					
09066310 GORE CREEK, LOWER STATION, AT VAIL, COLORADO (LAT 39 38 28N LONG 106 23 37W)									
OCT 1989					MAY 1990				
10...	1205	16.0	292	5.0	21...	1230	119	150	6.0
NOV					JUN				
08...	1220	12.0	350	1.0	18...	1445	452	80	8.5
DEC					JUL				
20...	1130	13.0	309	0.5	18...	1230	89.0	127	10.5
JAN 1990					AUG				
31...	1245	7.50	385	0.5	20...	1430	33.0	150	11.0
MAR					SEP				
14...	1150	10.0	404	1.0	17...	1250	31.0	190	6.5
APR									
26...	1225	61.0	185	2.0					
09066400 RED SANDSTONE CREEK NEAR MINTURN, CO. (LAT 39 40 58N LONG 106 24 03W)									
OCT 1989					MAY 1990				
13...	1240	0.910	101	3.0	22...	1500	32.5	53	--
NOV					JUN				
14...	1340	0.970	91	0.5	06...	1425	56.4	46	8.0
JAN 1990					JUL				
04...	1452	0.850	97	0.0	18...	1005	5.05	77	8.0
FEB					AUG				
14...	1050	0.610	95	0.5	16...	1410	2.37	80	10.0
MAR					SEP				
20...	1450	0.760	96	1.0	26...	0810	1.31	107	4.5
APR									
17...	1520	4.21	77	2.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09067000 BEAVER CREEK AT AVON, CO. (LAT 39 37 47N LONG 106 31 20W)									
OCT 1989					APR 1990				
12...	1657	3.24	286	8.5	20...	1148	7.61	306	5.5
NOV					MAY				
16...	1250	3.84	368	0.0	24...	1259	24.5	168	9.5
JAN 1990					JUN				
05...	1343	2.98	393	0.0	08...	1700	62.9	70	11.0
FEB					JUL				
15...	1440	2.63	407	0.5	19...	1410	12.6	130	16.0
MAR					AUG				
22...	1211	3.59	466	4.0	13...	1410	4.70	160	15.5
09067005 EAGLE RIVER AT AVON, CO. (LAT 39 37 54N LONG 106 31 19W)									
OCT 1989					APR 1990				
12...	1757	73.3	351	9.0	20...	1312	239	219	9.0
NOV					MAY				
16...	1352	43.2	469	0.5	24...	1330	1180	--	11.0
JAN 1990					JUN				
05...	1518	55.6	405	0.0	12...	1345	2070	84	9.0
FEB					13...	1350	1570	103	9.0
15...	1542	44.6	438	0.0	AUG				
MAR					17...	0805	146	215	12.5
22...	1322	54.1	437	7.0					
09070000 EAGLE RIVER BELOW GYPSUM, CO. (LAT 39 38 58N LONG 106 57 11W)									
OCT 1989					MAY 1990				
10...	1610	139	1100	14.0	14...	1615	384	517	12.0
NOV					JUN				
13...	1530	188	1110	7.5	04...	1650	1530	217	12.5
DEC					25...	1625	1220	397	16.0
11...	1425	156	1310	0.0	JUL				
JAN 1990					30...	1600	260	786	19.5
29...	1435	152	1650	1.0	AUG				
MAR					20...	1445	173	891	18.0
19...	1555	127	1390	10.0	SEP				
APR					24...	1545	143	1120	16.5
17...	1545	270	773	12.5					
09070500 COLORADO RIVER NEAR DOTSERO, CO. (LAT 39 38 40N LONG 107 04 40W)									
OCT 1989					JUN 1990				
10...	1250	1280	476	11.5	04...	1235	2990	278	12.5
NOV					25...	1240	2120	364	16.5
13...	1200	873	632	5.0	JUL				
MAR 1990					30...	1430	1410	551	18.0
19...	1430	731	700	8.0	AUG				
APR					20...	1110	1560	460	17.0
17...	1220	1720	464	11.5					
MAY									
14...	1210	1350	450	11.5					
09071300 GRIZZLY CREEK NEAR GLENWOOD SPRINGS, CO. (LAT 39 43 04N LONG 107 18 51W)									
OCT 1989					AUG 1990				
12...	1005	0.760	248	3.5	01...	1020	1.310	259	10.0
JUN 1990					22...	1155	0.980	257	8.0
06...	1155	141	170	3.0	SEP				
27...	1055	9.95	246	12.0	26...	1030	0.700	262	7.5

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09073300 ROARING FORK RIVER ABOVE DIFFICULT CREEK NEAR ASPEN, CO. (LAT 39 08 28N LONG 106 46 25W)									
OCT 1989					MAY 1990				
04...	0800	24.9	110	6.5	09...	0805	47.7	45	1.5
31...	1320	15.6	65	2.0	JUN				
DEC					06...	0840	305	25	4.0
06...	0820	18.1	60	0.0	14...	0825	276	30	5.0
JAN 1990					JUL				
24...	0825	18.7	65	0.0	11...	0755	70.8	35	10.0
MAR					AUG				
07...	0830	12.7	65	1.0	08...	0755	34.3	50	9.0
APR									
11...	0750	22.7	55	2.0					
09073400 ROARING FORK RIVER NEAR ASPEN, CO. (LAT 39 10 48N LONG 106 48 05W)									
OCT 1989					MAY 1990				
04...	0955	40.3	110	7.5	09...	0955	74.5	55	2.5
31...	1445	27.3	65	3.0	JUN				
DEC					06...	1120	473	25	6.0
05...	1445	29.3	65	1.0	14...	1135	397	30	7.0
JAN 1990					JUL				
23...	1520	33.5	70	0.5	11...	0950	125	40	11.0
MAR					AUG				
07...	1035	27.5	75	1.5	08...	0940	50.6	55	10.5
APR									
11...	0935	43.2	65	3.5					
09074000 HUNTER CREEK NEAR ASPEN, CO. (LAT 39 12 21N LONG 106 47 49W)									
OCT 1989					APR 1990				
03...	1335	6.1	100	10.5	10...	1445	9.30	55	8.0
NOV					MAY				
01...	0805	4.68	50	0.5	08...	1330	50.9	40	6.5
DEC					JUN				
05...	1310	4.58	60	0.0	05...	1315	114	20	8.5
JAN 1990					JUL				
23...	1325	5.72	60	0.5	10...	1325	46.3	30	13.0
MAR					AUG				
06...	1345	3.74	60	0.5	07...	1245	19.1	45	14.5
09074800 CASTLE CREEK ABOVE ASPEN, CO. (LAT 39 05 15N LONG 106 48 42W)									
OCT 1989					MAY 1990				
03...	0850	20.8	460	4.0	08...	0750	20.1	295	4.0
31...	0800	10.8	285	0.0	JUN				
DEC					05...	0805	178	140	3.0
05...	0800	12.9	300	0.0	14...	1400	134	140	10.5
JAN 1990					JUL				
23...	0810	7.33	295	0.0	10...	0830	87.8	170	6.0
MAR					AUG				
06...	0845	9.82	300	1.0	07...	0800	28.6	240	6.5
APR									
10...	0755	10.6	340	1.5					
09075700 MAROON CREEK ABOVE ASPEN, CO. (LAT 39 07 25N LONG 106 54 17W)									
OCT 1989					MAY 1990				
03...	1105	33.6	705	7.0	08...	1020	19.9	535	6.5
31...	1025	25.3	450	3.0	JUN				
DEC					05...	1030	157	240	7.0
05...	1000	17.7	505	0.0	15...	0825	302	165	5.5
JAN 1990					JUL				
23...	1010	14.1	510	0.0	10...	1040	164	200	8.5
APR					AUG				
10...	1120	14.0	605	5.0	07...	1005	56.0	330	8.0

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09080400 FRYINGPAN RIVER NEAR RUEDI, CO. (LAT 39 21 56N LONG 106 49 30W)									
OCT 1989					MAY 1990				
02...	1245	192	255	7.5	07...	1455	108	200	5.0
30...	1320	83.4	275	8.0	JUN				
DEC					04...	1420	133	180	6.0
04...	1345	85.7	160	6.0	JUL				
JAN 1990					09...	1455	130	175	6.5
22...	1345	77.8	185	4.5	AUG				
MAR					06...	1340	131	185	7.0
05...	1630	83.0	200	4.5					
APR									
09...	1500	82.2	240	5.5					
09081600 CRYSTAL RIVER ABOVE AVALANCHE CREEK, NEAR REDSTONE, CO. (LAT 39 13 56N LONG 107 13 36W)									
OCT 1989					MAY 1990				
04...	1300	79.6	690	12.5	09...	1305	231	265	7.0
NOV					JUN				
01...	1120	59.6	455	4.0	06...	1500	1160	130	11.5
DEC					13...	1530	1000	130	12.0
06...	1130	47.3	485	3.5	JUL				
JAN 1990					11...	1310	337	195	15.0
24...	1220	38.4	540	3.5	AUG				
MAR					08...	1245	102	345	16.0
07...	1335	42.2	570	6.5					
APR									
11...	1240	110	395	8.0					
09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO. (LAT 39 32 37N LONG 107 19 44W)									
OCT 1989					MAY 1990				
12...	1245	593	680	10.0	16...	1240	615	545	12.5
NOV					JUN				
15...	1235	518	690	4.5	07...	1350	3840	230	9.5
JAN 1990					28...	0945	2510	317	12.5
31...	1120	372	670	1.5	AUG				
MAR					02...	0910	518	679	12.5
21...	1325	324	666	12.0	23...	1315	585	692	12.0
APR									
19...	1100	438	552	12.0					
09085100 COLORADO RIVER BELOW GLENWOOD SPRINGS, CO. (LAT 39 33 18N LONG 107 20 13W)									
OCT 1989					APR 1990				
12...	1415	2000	1260	13.0	19...	1500	2060	960	12.5
NOV					MAY				
15...	1530	1430	1160	8.0	16...	1315	2420	721	11.5
DEC					JUN				
13...	1505	999	1500	1.0	07...	1640	9010	266	10.5
JAN 1990					27...	1555	4350	480	15.0
31...	1255	1210	1180	3.0	AUG				
MAR					01...	1555	2080	1217	17.0
21...	1525	1170	1290	12.0	23...	1530	2240	1290	16.0
09091100 MAMM CREEK NEAR SILT, CO. (LAT 39 31 54N LONG 107 42 48W)									
MAY 1990					JUL 1990				
07...	1105	3.32	--	12.5	09...	1140	8.44	535	19.0
JUN									
04...	1105	0.920	760	15.5					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09093700 COLORADO RIVER NEAR DE BEQUE, CO. (LAT 39 21 45N LONG 108 09 07W)									
OCT 1989					MAY 1990				
02...	1100	1740	1028	14.0	14...	1200	2110	690	14.0
NOV					JUN				
02...	1100	1630	990	4.0	07...	1000	9820	351	13.5
DEC					15...	1000	7770	421	14.5
07...	1100	1570	1290	2.5	JUL				
FEB 1990					10...	1000	3790	706	19.0
13...	1200	1160	1350	4.5	AUG				
MAR					15...	1000	1950	896	20.0
19...	1100	1280	1390	8.0					
APR									
16...	1100	1930	978	13.5					
09105000 PLATEAU CREEK NEAR CAMEO, CO. (LAT 39 11 00N LONG 108 16 10W)									
OCT 1989					MAY 1990				
06...	1300	62.8	786	12.0	09...	1200	85.1	498	9.5
NOV					17...	1000	70.6	511	11.0
13...	1400	69.6	850	5.5	24...	1100	224	325	14.0
29...	1400	36.5	910	0.0	JUN				
JAN 1990					04...	1300	81.4	532	19.0
26...	1000	63.3	655	0.0	15...	0800	46.0	622	15.0
FEB					JUL				
12...	1400	56.6	774	4.0	09...	1300	33.8	774	24.0
23...	1000	51.1	765	1.0	AUG				
MAR					07...	1045	19.7	760	19.0
15...	1100	50.9	834	2.5	SEP				
APR					20...	1000	52.7	760	12.0
25...	1200	92.8	565	10.0					
09107000 TAYLOR RIVER AT TAYLOR PARK, CO. (LAT 38 50 59N LONG 106 34 21W)									
OCT 1989					MAY 1990				
03...	--	46.3	118	--	15...	1225	116	90	5.0
31...	1040	25.0	--	0.5	JUN				
DEC					05...	1500	432	66	11.5
19...	1155	33.8	--	0.0	19...	1020	295	80	6.5
JAN 1990					JUL				
30...	1115	28.2	123	0.0	17...	1015	103	67	9.0
MAR					AUG				
13...	1055	31.2	111	2.0	14...	1510	64.0	116	15.5
APR									
18...	1030	71.4	103	3.5					
09107500 TEXAS CREEK AT TAYLOR PARK, CO. (LAT 38 50 41N LONG 106 34 12W)									
OCT 1989					MAY 1990				
03...	1230	14.8	75	10.5	15...	1400	25.2	76	8.0
31...	1225	22.2	--	0.5	JUN				
DEC					05...	1240	294	43	8.0
19...	1345	7.08	--	0.0	06...	1225	334	41	4.5
JAN 1990					19...	1215	151	44	10.0
30...	1305	6.15	88	0.0	JUL				
MAR					17...	1205	41.4	120	14.0
13...	1250	6.63	80	1.0	AUG				
APR					14...	1340	38.5	71	13.5
18...	1240	17.2	75	7.0					
09109000 TAYLOR RIVER BELOW TAYLOR PARK RESERVOIR, CO. (LAT 38 49 06N LONG 106 36 31W)									
OCT 1989					MAY 1990				
03...	1420	247	96	11.5	15...	1005	101	104	4.5
31...	1400	106	--	9.0	JUN				
DEC					05...	1020	198	106	6.5
19...	1600	102	--	3.0	19...	1420	351	100	7.5
JAN 1990					JUL				
30...	1450	103	114	3.0	17...	1400	250	99	8.5
MAR					AUG				
13...	1425	101	114	3.0	14...	1155	249	96	9.5
APR									
05...	1409	100	104	4.0					
18...	1420	97.6	116	4.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09110000 TAYLOR RIVER AT ALMONT, CO. (LAT 38 39 52N LONG 106 50 41W)									
OCT 1989					MAY 1990				
04...	0940	296	137	9.0	16...	0945	189	136	5.5
31...	1605	169	--	3.5	JUN				
DEC					06...	1310	504	128	10.0
20...	1020	122	--	1.0	19...	1640	502	125	13.5
JAN 1990					JUL				
31...	0945	165	162	0.0	17...	1610	349	132	14.0
MAR					AUG				
14...	0930	116	153	1.0	14...	0950	330	123	10.0
APR									
05...	1115	152	132	6.0					
17...	1055	174	132	6.0					
09112500 EAST RIVER AT ALMONT CO. (LAT 38 39 52N LONG 106 50 51W)									
OCT 1989					MAY 1990				
04...	1230	90.7	328	9.5	16...	1135	206	238	7.5
NOV					JUN				
01...	0945	73.1	--	2.5	06...	1540	1290	193	13.0
DEC					20...	1000	787	228	8.5
20...	1150	53.8	--	0.0	JUL				
JAN 1990					18...	0925	196	347	12.0
31...	1110	44.9	331	1.0	AUG				
MAR					15...	0945	145	334	13.0
14...	1115	45.4	330	1.5					
APR									
17...	1235	170	262	8.0					
09114500 GUNNISON RIVER NEAR GUNNISON, CO. (LAT 38 32 31N LONG 106 56 57W)									
OCT 1989					MAY 1990				
04...	1515	416	194	11.0	16...	1445	299	241	11.0
NOV					JUN				
01...	1155	240	--	3.5	06...	1755	1770	192	14.0
DEC					20...	1250	1340	212	12.0
20...	1350	211	--	0.5	JUL				
JAN 1990					18...	1140	541	264	14.5
31...	1320	232	210	1.0	AUG				
MAR					15...	1200	582	218	13.5
14...	1420	186	210	2.5					
APR									
19...	1015	310	222	5.5					
09118450 COCHETOPA CREEK BELOW ROCK CREEK NEAR PARLIN, CO. (LAT 38 20 08N LONG 106 46 18)									
OCT 1989					MAY 1990				
05...	1020	19.2	252	5.5	17...	0950	27.8	197	5.5
NOV					JUN				
01...	1615	29.2	--	0.0	07...	0930	107	163	8.5
DEC					20...	1615	34.0	272	20.5
18...	1425	16.0	--	0.0	JUL				
JAN 1990					18...	1550	36.2	299	17.0
29...	1435	11.5	274	0.0	AUG				
MAR					15...	1605	74.2	172	15.0
12...	1450	23.0	243	1.0					
APR									
17...	1520	28.9	182	9.0					
09119000 TOMICHI CREEK AT GUNNISON, CO. (LAT 38 31 18N LONG 106 56 25W)									
OCT 1989					MAY 1990				
05...	1330	66.9	333	12.0	16...	1630	77.5	366	14.0
NOV					JUN				
01...	1345	67.5	--	5.0	07...	1205	472	298	15.0
DEC					20...	1420	115	345	21.0
18...	1635	65.7	--	0.0	JUL				
JAN 1990					18...	1335	172	373	21.0
29...	1645	49.8	276	0.0	AUG				
MAR					15...	1340	146	261	17.0
13...	1640	114	245	0.0					
APR									
19...	1210	48.9	281	9.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09124500 LAKE FORK AT GATEVIEW, CO. (LAT 38 17 56N LONG 107 13 46W)									
OCT 1989					APR 1990				
05...	1620	75.1	173	12.0	05...	1740	50.1	170	9.0
NOV					19...	1440	56.7	180	12.0
02...	1010	50.3	--	1.0	MAY				
DEC					17...	1255	242	174	20.0
20...	1610	38.7	--	1.0	JUN				
JAN 1990					07...	1520	1270	109	13.0
31...	1520	32.4	195	1.0	21...	1015	630	89	10.0
MAR					JUL				
14...	1605	29.2	186	1.0	19...	0945	211	129	9.5
					AUG				
					16...	1000	109	156	15.5
09126000 CIMARRON RIVER NEAR CIMARRON, CO. (LAT 38 15 45N LONG 107 32 39W)									
OCT 1989					MAY 1990				
06...	1130	69.4	139	12.0	14...	1505	43.0	115	11.0
NOV					JUN				
02...	1400	6.80	--	6.0	04...	1450	410	111	9.0
DEC					21...	1330	210	78	10.5
21...	1315	10.9	--	0.0	JUL				
FEB 1990					19...	1345	90.9	81	12.0
01...	1235	6.23	173	0.5	AUG				
APR					16...	1350	93.2	104	16.0
06...	1450	8.78	123	9.0					
20...	1050	10.5	102	2.5					
09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO. (LAT 38 31 45N LONG 107 38 54W)									
OCT 1989					APR 1990				
02...	1515	497	211	13.0	16...	1500	377	228	8.5
30...	1500	313	--	8.5	MAY				
DEC					17...	1620	317	231	8.5
22...	1050	342	--	4.0	JUN				
FEB 1990					08...	0950	303	261	10.5
02...	0950	327	209	2.0	18...	1450	293	199	12.0
MAR					JUL				
02...	1100	305	180	3.0	16...	1455	299	249	13.5
14...	1345	914	243	4.0	AUG				
16...	0955	315	213	3.5	13...	1550	301	224	12.0
09128500 SMITH FORK NEAR CRAWFORD, CO. (LAT 38 43 40N LONG 107 30 22W)									
OCT 1989					APR 1990				
05...	1340	6.84	135	12.0	12...	1305	28.0	120	8.5
NOV					MAY				
02...	1305	5.44	130	4.0	10...	1355	83.0	80	9.5
DEC					JUN				
07...	1325	5.67	120	0.0	07...	1330	77.0	65	13.0
JAN 1990					JUL				
25...	1300	5.75	120	0.0	12...	1325	17.8	100	20.0
MAR					AUG				
08...	1235	6.38	140	4.5	09...	1315	9.00	115	20.5
09132500 NORTH FORK GUNNISON RIVER NEAR SOMERSET, CO. (LAT 38 55 33N LONG 107 26 01W)									
OCT 1989					MAY 1990				
05...	0825	65.3	200	7.0	10...	0920	684	115	5.0
NOV					JUN				
02...	0815	34.2	145	0.0	01...	1210	745	--	9.0
DEC					07...	0900	1270	55	8.0
07...	0830	53.8	140	0.0	13...	1140	892	60	12.0
JAN 1990					JUL				
25...	0755	29.6	140	0.0	12...	0750	218	95	13.0
MAR					AUG				
08...	0755	42.0	155	0.5	09...	0820	239	130	13.0
APR									
12...	0815	166	100	4.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09134000 MINNESOTA CREEK NEAR PAONIA, CO. (LAT 38 52 13N LONG 107 30 06W)									
OCT 1989					APR 1990				
05...	1035	3.81	465	8.5	12...	1030	5.40	475	6.5
NOV					MAY				
02...	1010	1.29	480	1.5	10...	1130	19.6	265	7.5
DEC					JUN				
07...	1030	1.74	375	1.0	07...	1105	34.8	130	11.0
JAN 1990					JUL				
25...	1015	1.92	435	0.0	12...	1030	15.7	195	16.5
MAR					AUG				
08...	1000	2.52	590	3.0	09...	1035	7.95	265	16.5
09135900 LEROUX CREEK AT HOTCHKISS, CO. (LAT 38 47 53N LONG 107 43 53W)									
OCT 1989					APR 1990				
05...	1600	5.78	1475	14.5	12...	1510	2.01	555	17.5
NOV					MAY				
02...	1505	9.92	825	10.0	10...	1620	2.54	1080	17.5
DEC					JUN				
06...	1515	7.63	820	9.0	07...	1545	3.11	1085	23.0
JAN 1990					JUL				
25...	1510	5.60	840	5.0	12...	1545	3.52	970	23.0
MAR					AUG				
08...	1435	2.86	960	13.5	09...	1550	3.83	1080	22.0
09143000 SURFACE CREEK NEAR CEDAREDEGE, CO. (LAT 38 59 05N LONG 107 51 13W)									
OCT 1989					APR 1990				
06...	0825	9.05	150	2.0	13...	0840	11.5	110	1.0
NOV					MAY				
03...	0810	1.85	120	0.0	11...	0855	48.0	90	3.0
DEC					JUN				
08...	0835	2.49	110	0.0	08...	0840	88.8	60	7.0
JAN 1990					JUL				
26...	0840	4.01	125	0.0	13...	0835	32.6	60	12.0
MAR					AUG				
09...	0830	3.58	120	0.0	10...	0855	74.5	60	12.5
09143500 SURFACE CREEK AT CEDAREDEGE, CO. (LAT 38 54 06N LONG 107 55 14W)									
OCT 1989					APR 1990				
06...	1015	4.18	145	10.5	13...	1045	15.4	110	5.0
NOV					MAY				
03...	1030	1.15	170	0.0	11...	1125	46.7	85	6.0
DEC					JUN				
08...	1005	4.64	130	0.0	08...	1050	52	55	10.5
JAN 1990					JUL				
26...	1020	4.32	120	0.0	13...	1100	10.8	65	16.0
MAR					AUG				
09...	1030	2.59	125	3.5	10...	1100	35.5	60	14.5
09144250 GUNNISON RIVER AT DELTA, CO. (LAT 38 45 01N LONG 108 04 06W)									
OCT 1989					MAY 1990				
05...	0900	601	1302	12.0	15...	1200	781	846	14.0
NOV					JUN				
14...	1200	567	1244	6.0	08...	1300	1570	597	17.5
DEC					14...	1400	1150	775	18.0
20...	1000	527	1058	0.0	JUL				
FEB 1990					13...	1300	446	1025	21.0
14...	1000	599	1000	3.0	AUG				
MAR					06...	1000	389	1320	17.0
16...	1300	468	1036	6.0	SEP				
APR					04...	1100	418	1280	18.0
20...	1100	581	1160	13.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09146200 UNCOMPAHGRE RIVER NEAR RIDGWAY, CO. (LAT 38 11 02N LONG 107 44 43W)									
OCT 1989					MAY 1990				
03...	1305	59.4	736	12.5	17...	1320	169	477	11.5
NOV					31...	1430	224	1460	15.0
15...	1135	44.5	751	5.5	JUN				
JAN 1990					07...	1040	675	352	7.0
03...	1200	38.1	802	0.0	13...	1200	615	430	11.0
FEB					JUL				
16...	1115	39.2	884	0.0	18...	1530	147	670	17.0
APR					AUG				
12...	1200	66.8	654	9.0	07...	1200	77.9	790	14.0
09147000 DALLAS CREEK NEAR RIDGWAY, CO. (LAT 38 10 40N LONG 107 45 28W)									
OCT 1989					MAY 1990				
03...	1410	4.74	1170	15.0	17...	1120	0.700	1120	15.5
NOV					JUN				
15...	1130	8.76	1120	2.5	07...	1145	10.2	775	13.0
JAN 1990					13...	1025	57.3	758	10.0
03...	1025	12.8	647	0.0	JUL				
FEB					19...	0850	16.9	913	14.0
16...	1150	7.53	763	0.0	AUG				
APR					07...	1600	3.49	1060	22.0
12...	1045	2.63	1400	6.5					
09147025 UNCOMPAHGRE RIVER BELOW RIDGWAY RESERVOIR, CO. (LAT 38 14 17N LONG 107 45 31W)									
OCT 1989					MAY 1990				
03...	1115	58.1	515	12.5	07...	1300	113	709	5.0
NOV					17...	1455	195	613	12.5
15...	1340	43.6	636	11.0	31...	1230	310	654	14.0
JAN 1990					JUN				
03...	1240	44.8	671	5.0	07...	1300	767	657	16.0
FEB					13...	1500	1150	556	18.0
16...	0945	41.4	676	1.5	20...	1130	415	530	16.0
APR					JUL				
12...	1315	38.9	802	6.0	18...	1400	339	646	7.0
					AUG				
					07...	0800	306	690	6.5
09147500 UNCOMPAHGRE RIVER AT COLONA, CO. (LAT 38 19 53N LONG 107 46 44W)									
OCT 1989					MAY 1990				
02...	1150	30.4	665	13.0	18...	0940	228	500	8.5
30...	1215	74.0	--	9.0	JUN				
DEC					07...	1900	920	555	16.5
21...	1620	53.9	--	5.0	21...	1705	446	552	18.5
FEB 1990					JUL				
01...	1545	45.6	768	4.5	16...	1210	283	762	13.5
MAR					AUG				
15...	1500	57.6	662	9.0	13...	1325	294	660	11.5
APR									
16...	1220	69.9	521	11.0					
09149500 UNCOMPAHGRE RIVER AT DELTA, CO. (LAT 38 44 31N LONG 108 04 49W)									
OCT 1989					MAY 1990				
03...	1100	266	--	14.0	15...	0900	212	1590	12.0
NOV					JUN				
14...	0900	155	2220	4.5	05...	0900	544	1230	13.0
DEC					14...	0900	535	1165	14.0
20...	0900	106	2350	0.0	JUL				
FEB 1990					13...	1000	236	1594	17.5
14...	1100	97.9	2330	4.0	AUG				
MAR					06...	1300	180	1674	20.0
16...	0900	65.5	2290	1.5	SEP				
APR					04...	1300	--	1730	20.0
20...	0900	268	1542	9.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09153290 REED WASH NEAR MACK, CO. (LAT 39 12 41N LONG 108 48 11W)									
OCT 1989					APR 1990				
05...	1400	68.2	1910	14.0	06...	0800	108	1325	12.5
NOV					MAY				
01...	1000	75.5	1890	5.0	11...	1100	66.3	1717	12.5
13...	1000	12	4150	8.5	JUN				
DEC					04...	0900	81	1340	13.0
13...	0900	7.3	4550	2.5	JUL				
FEB 1990					10...	1500	42.2	2390	22.5
13...	1400	4.55	4500	8.5	AUG				
MAR					16...	0800	75	1860	17.0
15...	1300	3.34	4980	9.0					
09165000 DOLORES RIVER BELOW RICO, CO. (LAT 37 38 20N LONG 108 03 35W)									
OCT 1989					MAY 1990				
03...	1635	22.2	486	10.0	08...	1135	199	204	8.0
NOV					24...	1205	513	132	6.0
15...	1615	18.1	615	1.5	JUN				
JAN 1990					06...	1000	590	160	4.0
03...	1610	7.68	696	0.0	JUL				
MAR					19...	1130	70.3	250	14.0
07...	1315	14.7	225	0.0	AUG				
APR					15...	1020	131	--	10.5
04...	1230	18.9	590	4.0					
09166500 DOLORES RIVER AT DOLORES, CO. (LAT 37 28 21N LONG 108 29 49W)									
OCT 1989					MAY 1990				
05...	0955	125	398	7.0	08...	0930	801	256	6.0
DEC					24...	1000	1560	134	7.0
19...	1310	17.3	661	0.0	JUN				
JAN 1990					05...	1515	1260	171	10.0
30...	1255	18.8	652	0.0	21...	1315	342	253	19.0
FEB					JUL				
23...	1420	26.9	595	0.5	23...	1305	128	305	19.5
APR					AUG				
04...	1410	77.1	357	8.0	15...	1310	329	--	16.5
17...	1115	287	317	8.0					
09166950 LOST CANYON CREEK NEAR DOLORES, CO. (LAT 37 26 45N LONG 108 28 03W)									
MAR 1990					MAY 1990				
07...	1430	0.047	1140	--	08...	1320	28.8	90	12.0
APR					JUN				
04...	1445	0.380	380	11.0	21...	1420	0.018	1060	20.0
17...	1300	0.170	530	15.0					
09172500 SAN MIGUEL RIVER NEAR PLACERVILLE, CO. (LAT 38 02 05N LONG 108 07 15W)									
OCT 1989					MAY 1990				
03...	0905	52.6	436	8.0	17...	1025	193	334	6.5
NOV					31...	1630	287	292	12.0
15...	0930	42.8	419	0.0	JUN				
JAN 1990					06...	1240	822	205	9.0
03...	0925	50.1	566	0.0	13...	0850	776	187	6.0
MAR					JUL				
07...	1125	37.7	534	1.0	18...	0850	154	296	15.0
APR					AUG				
12...	0900	76.6	436	4.5	09...	0850	70.6	413	18.0

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09177000 SAN MIGUEL RIVER AT URAVAN, CO. (LAT 38 21 26N LONG 108 42 44W)									
OCT 1989					JUN 1990				
02...	1755	25.0	1660	17.5	01...	0915	252	551	13.0
NOV					06...	1650	942	307	18.0
14...	1620	61.8	960	8.0	JUL				
JAN 1990					18...	0900	118	819	19.5
02...	1555	52.9	1000	0.0	AUG				
MAR					08...	1400	29.0	1500	25.0
07...	0930	77.7	987	4.0	SEP				
APR					07...	1100	74.0	1630	18.0
11...	1830	77.4	1070	17.5					
MAY									
17...	0810	276	614	10.5					
09238705 LONG LAKE INLET NEAR BUFFALO PASS, CO. (LAT 40 28 25N LONG 106 40 46W)									
OCT 1989					SEP 1990				
02...	1318	0.050	47	7.5	06...	1020	0.130	41	--
JUL 1990									
17...	1117	0.560	19	--					
09238710 FISH CREEK TRIBUTARY BELOW LONG LAKE, NEAR BUFFALO PASS, CO. (LAT 40 28 36N LONG 106 41 13W)									
JUL 1990									
17...	1238	0.980	17	--					
09238750 MIDDLE FORK FISH CREEK NEAR BUFFALO PASS, CO. (LAT 40 29 54N LONG 106 41 30W)									
OCT 1989					SEP 1990				
02...	1020	0.140	43	8.0	06...	0925	0.200	37	12.0
JUL 1990									
17...	1530	1.10	17	--					
09238770 GRANITE CREEK NEAR BUFFALO PASS, CO. (LAT 40 29 35N LONG 106 41 31W)									
OCT 1989					JUL 1990				
02...	1115	0.500	47	--	17...	1310	4.39	17	--
JUN 1990					SEP				
26...	1335	26.8	7	--	06...	1100	0.620	41	--
09238800 MIDDLE FORK FISH CREEK TRIBUTARY BELOW FISH CREEK RESERVOIR, CO. (LAT 40 29 50N LONG 106 41 54W)									
JUL 1990									
17...	1450	3.04	18	--					
09238900 FISH CREEK AT UPPER STATION NEAR STEAMBOAT SPRINGS, CO. (LAT 40 28 30N LONG 106 47 11W)									
OCT 1989					APR 1990				
02...	1635	4.89	29	10.0	11...	0928	30.4	46	3.0
NOV					18...	1050	52.8	32	4.5
02...	1515	5.69	35	1.5	MAY				
DEC					17...	1245	48.9	36	7.5
12...	1230	2.56	70	1.0	JUL				
JAN 1990					09...	1300	64.8	23	16.0
17...	1050	4.53	44	2.5	SEP				
FEB					06...	1250	4.01	29	--
06...	0945	3.50	39	1.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09239500 YAMPA RIVER AT STEAMBOAT SPRINGS, CO. (LAT 40 29 01N LONG 106 49 54W)									
OCT 1989					APR 1990				
02...	1625	55.7	273	16.5	11...	1135	356	205	7.5
NOV					18...	1030	551	184	7.0
02...	1500	153	330	6.0	23...	1050	670	180	8.0
DEC					MAY				
13...	1225	62.1	355	1.5	25...	1200	1640	53	11.0
JAN 1990					JUN				
17...	1025	68.4	395	2.0	08...	1125	1820	46	12.0
FEB					JUL				
06...	0925	57.2	380	0.5	10...	1020	275	122	18.5
MAR					AUG				
08...	1030	107	390	3.5	02...	1505	93.6	196	24.0
					SEP				
					06...	1430	57.4	232	--
09240900 ELK RIVER ABOVE CLARK, CO. (LAT 40 44 38N LONG 106 51 13W)									
OCT 1989					APR 1990				
03...	0855	44.0	89	4.5	13...	0930	105	99	5.5
NOV					MAY				
14...	1428	41.8	105	1.0	01...	1005	127	119	5.5
DEC					21...	1010	332	56	7.0
20...	1015	37.9	99	1.0	30...	1025	615	46	7.0
JAN 1990					JUL				
22...	0955	31.9	104	1.5	02...	1000	576	38	14.0
FEB					AUG				
12...	1055	34.7	98	2.5	02...	1010	112	58	14.5
MAR									
22...	1130	39.0	123	4.5					
09241000 ELK RIVER AT CLARK, CO. (LAT 40 43 03N LONG 106 54 55W)									
OCT 1989					MAR 1990				
03...	0933	43.1	88	6.0	22...	1210	53.6	106	4.0
NOV					APR				
04...	1555	33.0	101	0.5	13...	1030	192	102	4.0
14...	1516	33.4	101	0.5	MAY				
DEC					01...	1115	367	86	5.5
20...	1155	57.6	102	1.0	30...	1130	732	48	8.0
JAN 1990					JUL				
22...	1100	55.4	106	2.0	02...	1115	538	40	15.0
FEB					AUG				
12...	1135	49.2	107	2.0	02...	1105	115	59	15.0

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09243700 MIDDLE CREEK NEAR OAK CREEK, CO. (LAT 40 23 08N LONG 106 59 33W)									
NOV 1989					APR 1990				
02...	1205	0.130	1390	4.5	04...	1050	4.63	709	8.0
DEC					30...	1015	3.35	740	8.0
12...	1030	0.460	1080	0.5	JUN				
JAN 1990					14...	1015	0.960	726	22.0
02...	1010	0.230	1030	0.5	JUL				
FEB					11...	1035	0.280	939	25.0
07...	0950	0.640	1050	1.5					
MAR									
12...	1122	0.800	900	2.5					
09243900 FOIDEL CREEK AT MOUTH, NEAR OAK CREEK, CO. (LAT 40 23 25N LONG 106 59 39W)									
OCT 1989					MAR 1990				
06...	1010	0.180	3160	8.0	12...	1315	1.31	2730	2.5
NOV					APR				
02...	1140	0.340	3210	1.5	04...	0950	7.36	1740	8.0
DEC					30...	0920	3.16	2480	5.0
12...	1105	0.900	3190	0.5	JUN				
JAN 1990					14...	0920	1.39	2780	16.0
02...	0915	0.610	3180	1.0	JUL				
FEB					11...	0930	0.450	3030	19.0
07...	0840	0.840	3250	1.5					
09245000 ELKHEAD CREEK NEAR ELKHEAD, CO. (LAT 40 40 11N LONG 107 17 04W)									
OCT 1989					APR 1990				
05...	1435	1.91	313	10.5	06...	1210	49.1	342	12.0
NOV					17...	1110	189	187	7.0
03...	1310	3.54	338	2.5	MAY				
DEC					08...	1035	155	134	10.0
11...	1100	5.72	318	0.5	JUN				
JAN 1990					13...	1130	93.1	205	16.5
18...	1035	2.52	--	0.5	JUL				
MAR					12...	0855	6.44	240	17.0
01...	1005	2.94	320	3.5	SEP				
					07...	0850	1.49	296	--
09247600 YAMPA RIVER BELOW CRAIG, CO. (LAT 40 28 51N LONG 107 36 49W)									
JAN 1990					JUN 1990				
19...	1330	166	305	0.5	08...	1540	4890	189	11.5
MAR					JUL				
19...	1212	386	196	2.0	18...	1035	388	261	23.5
APR					SEP				
13...	1340	1350	222	9.5	06...	1125	228	363	19.0
MAY									
17...	1530	1600	307	9.5					
09250507 WILSON CREEK ABOVE TAYLOR CREEK NEAR AXIAL, CO. (LAT 40 18 53N LONG 107 47 58)									
OCT 1989					JUN 1990				
31...	0920	0.630	1758	2.0	14...	1039	0.810	1553	15.5
JAN 1990					JUL				
09...	1130	0.830	1596	0.5	31...	1032	0.400	1780	17.5
FEB					AUG				
06...	1355	0.600	1736	0.5	16...	1440	0.400	1685	20.5
APR					SEP				
11...	1440	1.41	1210	11.5	13...	1320	0.330	1426	19.5
MAY									
18...	1412	1.13	1436	12.0					
09250510 TAYLOR CREEK AT MOUTH NEAR AXIAL, CO. (LAT 40 18 48N LONG 107 47 57W)									
OCT 1989					MAY 1990				
31...	1010	0.010	1600	0.5	18...	1524	0.010	494	12.0
JAN 1990					JUN				
09...	1234	1.58	211	1.0	14...	115	0.010	586	17.0

MISCELLANEOUS STATION ANALYSES

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09253000 LITTLE SNAKE RIVER NEAR SLATER, CO. (LAT 40 59 58N LONG 107 08 34W)									
OCT 1989					MAY 1990				
03...	1229	18.4	191	11.5	23...	1030	694	93	7.5
NOV					JUN				
21...	1227	18.2	109	2.0	25...	1150	220	76	14.5
JAN 1990					JUL				
25...	1105	25.4	106	0.5	19...	1245	61.4	82	19.0
MAR					AUG				
22...	1216	44.0	102	2.5	07...	1434	25.2	148	21.5
APR					SEP				
17...	1215	326	96	5.0	12...	1150	11.8	194	17.0
09255000 SLATER FORK NEAR SLATER, CO. (LAT 40 58 54N LONG 107 22 58W)									
OCT 1989					JUN 1990				
03...	1400	5.50	201	11.5	08...	1010	155	84	11.0
NOV					25...	1315	43.5	152	20.5
21...	1340	16.2	206	3.0	JUL				
JAN 1990					19...	1400	6.51	317	25.0
25...	1400	14.9	148	0.5	SEP				
MAR					12...	1330	5.06	468	18.5
22...	1343	23.8	255	3.0					
APR									
17...	1425	150	106	7.0					
09258000 WILLOW CREEK NEAR DIXON, WY. (LAT 40 54 56N LONG 107 31 16W)									
OCT 1989					MAY 1990				
03...	1605	1.51	182	13.5	10...	1155	3.62	206	7.5
NOV					JUN				
21...	1410	2.06	190	3.5	25...	1435	11.1	101	19.5
JAN 1990					JUL				
18...	1200	1.85	116	0.5	19...	1539	0.850	214	25.0
MAR					AUG				
27...	1119	5.64	383	9.5	09...	1340	0.040	167	20.0
APR					SEP				
17...	1615	9.10	96	8.5	12...	1543	0.990	196	20.5
09260000 LITTLE SNAKE RIVER NEAR LILY, CO. (LAT 40 32 50N LONG 108 25 25W)									
OCT 1989					JUN 1990				
06...	1415	6.14	1342	18.5	06...	1515	1040	378	12.0
NOV					13...	1410	2900	386	11.0
20...	1445	94.3	236	2.0	JUL				
JAN 1990					30...	1450	22.4	992	28.0
23...	1030	81.6	683	0.0	AUG				
FEB					24...	1155	0.750	336	20.5
28...	1100	26.8	336	0.5	SEP				
APR					10...	1051	0.050	998	21.0
04...	1500	381	326	9.5					
MAY									
24...	1210	813	231	11.0					
09260050 YAMPA RIVER AT DEERLODGE PARK, CO. (LAT 40 27 02N LONG 108 31 20W)									
OCT 1989					MAY 1990				
13...	1200	140	737	9.5	29...	1230	4390	386	11.5
NOV					JUN				
20...	1340	256	208	2.0	07...	1515	6810	189	16.5
JAN 1990					JUL				
22...	1250	194	201	0.0	30...	1200	328	201	18.0
FEB					AUG				
27...	1200	383	293	0.0	17...	1200	92.7	497	22.5
APR					SEP				
10...	1100	2130	305	8.0	10...	1338	190	704	23.5

MISCELLANEOUS STATION ANALYSES

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09303300 SOUTH FORK WHITE RIVER AT BUDGES RESORT, CO. (LAT 39 50 36N LONG 107 20 03W)									
OCT 1989					JUN 1990				
03...	1311	46.0	145	11.0	25...	1302	106	145	10.0
NOV					JUL				
13...	1140	55.4	154	5.0	30...	1423	56.4	176	11.0
JAN 1990					AUG				
09...	1525	53.8	120	0.5	24...	1448	57.0	168	10.0
MAY					SEP				
23...	1216	155	156	8.5	28...	1210	44.4	209	5.0
09303400 SOUTH FORK WHITE RIVER NEAR BUDGES RESORT, CO. (LAT 39 51 51N LONG 107 32 00W)									
OCT 1989					MAY 1990				
05...	1251	82.0	195	7.5	10...	1439	187	194	7.5
NOV					25...	1250	598	200	6.5
06...	1102	70.0	197	3.5	JUN				
DEC					04...	1449	638	185	11.0
05...	1328	60.6	156	1.5	JUL				
JAN 1990					03...	1027	166	208	12.5
26...	1004	64	166	0.5	AUG				
FEB					10...	1026	84.0	219	11.0
26...	1225	54.0	169	0.5					
APR									
04...	1348	85.0	164	6.5					
09339900 EAST FORK SAN JUAN RIVER ABOVE SAND CREEK, NEAR PAGOSA SPRINGS, CO. (LAT 37 23 23N LONG 106 50 26W)									
OCT 1989					MAY 1990				
02...	1340	17.9	--	10.0	08...	1220	166	106	9.0
NOV					21...	1055	202	102	8.5
16...	1100	8.69	147	0.0	24...	1120	452	81	6.0
JAN 1990					JUN				
11...	1035	6.08	155	0.0	06...	1105	366	77	8.0
MAR					JUL				
21...	1130	13.0	157	2.5	12...	1120	64.2	118	14.5
APR					AUG				
10...	1120	34.9	149	6.0	14...	1200	33.7	147	14.0
09342500 SAN JUAN RIVER AT PAGOSA SPRINGS, CO. (LAT 37 15 58N LONG 107 00 37W)									
OCT 1989					MAY 1990				
02...	0945	49.0	203	10.5	08...	1515	872	100	9.5
NOV					21...	0820	1020	84	11.0
16...	0940	33.5	187	1.0	24...	0915	1820	56	5.5
JAN 1990					JUN				
11...	0925	32.1	194	1.0	06...	0950	1930	48	5.0
MAR					JUL				
06...	0955	52.1	--	2.5	12...	0950	266	146	15.0
APR					AUG				
10...	0930	242	523	7.0	14...	1020	92.2	172	16.5
09346000 NAVAJO RIVER AT EDITH, CO. (LAT 37 00 10N LONG 106 54 25W)									
OCT 1989					MAY 1990				
02...	1135	38.9	280	8.0	08...	1435	119	183	14.5
NOV					21...	1255	86.5	175	15.0
16...	1240	28	749	1.5	JUL				
JAN 1990					12...	1325	78.4	235	21.0
11...	1245	30.0	254	0.0	AUG				
MAR					14...	1415	58.7	235	19.0
06...	1155	37.8	300	0.0					
APR									
10...	1340	56.7	281	11.5					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
09346400 SAN JUAN RIVER NEAR CARRACAS, CO. (LAT 37 00 49N LONG 107 18 42W)									
OCT 1989					MAY 1990				
31...	1115	104	324	3.0	09...	1030	1160	141	9.5
JAN 1990					22...	1045	1550	126	12.5
11...	1430	84.5	--	0.0	25...	0930	2060	86	8.0
MAR					JUN				
07...	1335	145	437	3.0	07...	1140	2100	80	11.5
APR					JUL				
11...	1335	374	303	8.0	17...	1005	396	226	19.0
					AUG				
					16...	1020	429	257	14.0
09349800 PIEDRA RIVER NEAR ARBOLES, CO. (LAT 37 05 18N LONG 107 23 50W)									
OCT 1989					MAY 1990				
31...	1250	69.2	347	6.0	09...	1245	950	163	9.5
JAN 1990					22...	1150	1130	131	10.0
12...	1030	32.4	570	0.0	24...	1320	1610	113	11.0
MAR					JUN				
06...	1425	62.6	477	2.5	07...	0920	1690	89	8.5
APR					JUL				
09...	1230	413	287	8.0	17...	1145	373	200	19.5
					AUG				
					16...	1140	330	207	16.5
09361500 ANIMAS RIVER AT DURANGO, CO. (LAT 37 16 45N LONG 107 52 47W)									
OCT 1989					MAY 1990				
27...	1430	209	622	10.5	07...	1410	1250	450	10.0
NOV					24...	1545	3330	160	8.0
28...	1420	146	725	3.0	JUN				
DEC					05...	1200	4250	123	7.0
28...	1335	129	1010	3.0	28...	1405	1130	270	15.0
JAN 1990					JUL				
29...	1315	132	715	1.0	29...	1000	371	537	18.0
MAR					AUG				
16...	1300	114	745	8.0	30...	1020	335	616	18.0
28...	1400	181	602	10.0	SEP				
APR					24...	1215	519	444	14.0
16...	1420	404	533	13.0					
09371000 MANCOS RIVER NEAR TOWAOC, CO. (LAT 37 01 39N LONG 108 44 27W)									
OCT 1989					APR 1990				
05...	1145	27.1	1250	14.0	10...	0900	2.9	2380	8.0
DEC					JUL				
19...	1015	3.47	382	0.0	17...	0800	16	1540	20.0
JAN 1990					AUG				
30...	1015	5.88	2630	0.0	17...	1040	86.5	1330	20.0
FEB					22...	1255	12.0	1980	24.5
23...	1045	12.3	1970	3.0					
09371002 NAVAJO WASH NEAR TOWAOC, CO. (LAT 37 12 03N LONG 108 41 50W)									
OCT 1989					MAY 1990				
05...	1250	17.5	2600	14.0	02...	1010	41.4	2660	9.0
DEC					JUN				
19...	1125	0.560	4810	0.0	21...	1020	7.80	1750	16.0
JAN 1990					JUL				
30...	1250	0.600	6190	0.0	09...	1205	11.9	1750	21.5
FEB					18...	0730	18.9	1380	18.0
23...	1250	1.03	8630	--	AUG				
MAR					17...	1250	32.8	1970	20.5
28...	0730	0.87	6880	6.0	SEP				
APR					26...	1230	13.5	1710	16.0
23...	1340	11.3	1790	14.0					

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above Darling Creek, near Leal.....	70,367		

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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